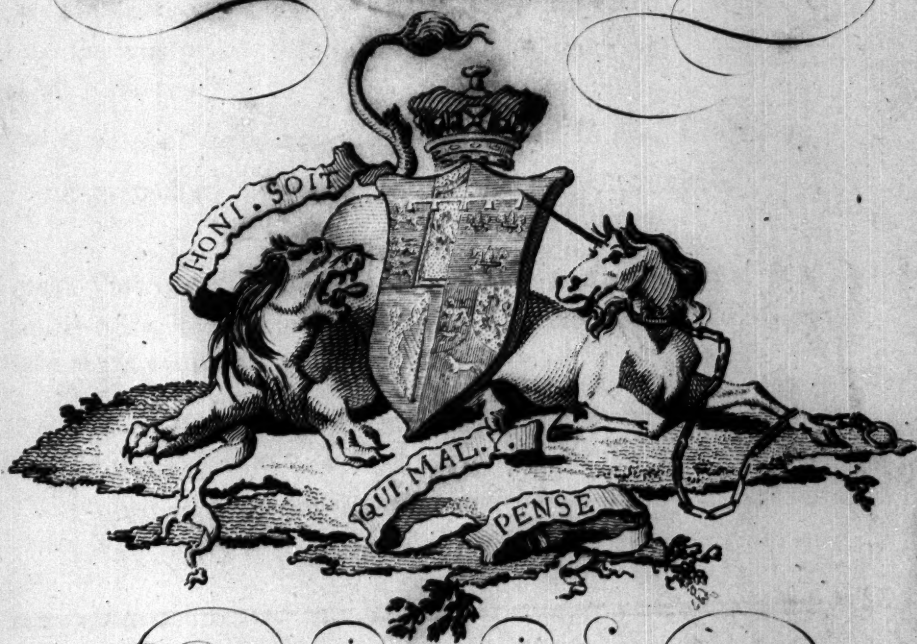


THE
Habitable World
DESCRIBED.

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His Royal Highness Frederick,
DUKE OF YORK, &c. &c.



L O N D O N:
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N^o 62, Wardour Street, Soho.
1788.



T H E
HABITABLE WORLD
DESCRIBED,

OR THE PRESENT STATE OF THE PEOPLE IN ALL PARTS
OF THE GLOBE, FROM NORTH TO SOUTH;

S H E W I N G

The Situation, Extent, Climate, Productions, Animals, &c. of the
different Kingdoms and States;

Including all the new Discoveries:

TOGETHER WITH

The Genius, Manners, Customs, Trade, Religion, Forms of Govern-
ment, &c. of the Inhabitants, and every thing respecting them,
that can be either entertaining or informing to the Reader, collected
from the earliest and latest Accounts of Historians and Travellers
of all Nations;

With some that have never been published in this Kingdom;

And, nothing advanced but on the best Authorities.

W I T H

A great Variety of MAPS and COPPER-PLATES, engraved in a
capital Stile, the Subjects of which are mostly *new*, and such as
have never yet been given in any English work.

BY THE REV. DR. JOHN TRUSLER.

VOL. IV.

L O N D O N.

Printed for the AUTHOR, at the Literary-Press, No. 62, WARDOUR-
STREET, SOHO; and sold by all Bookfellers.

M DCC LXXXIX.



TRAVELS
THROUGH
Siberia and Tartary,
PROVINCES OF THE RUSSIAN EMPIRE;

By S. PALLAS, M.D.

PROFESSOR OF NATURAL HISTORY, &c.

PART III. CONTINUED.

I SHALL now speak of the Jugrian and Obdirian Samojedes; Mr. Surjef having had an opportunity, in the above northern tour, of seeing a good deal of them: yet the accounts he brought are, in some measure, imperfect; as but few Samojedes live in the districts of Obdorskaja; and the rest, having partly mixed themselves with the Eastjaiks, by marriage.

The Samojedes, who call themselves Chasowa, or Ghosovo, that is, *men*, were made tributary to the Russian empire so early as 1525; whereas, the other nations of Siberia, were not conquered till the 17th century. They inhabit the coasts of the frozen sea, from the 65th degree of north-latitude, to the sea-shore; that is, all the northern districts of Russia and Siberia, as far as to the Jenisei, but are within this district, divided into many tribes, different even in their dialects. Probably all those, to whom the Russians give the name of Samojedes, are not of the same origin. What is said here, is meant of those Samojedes who live between the river Ob, and the Jugrian mountains.

Nothing more probable can be concluded, but that the whole of this people must originally have been one nation, expelled by war from their abodes, and who settled on the extreme boundaries of the northern hemisphere. This nation must long have inhabited a cold and mountainous country, and have there lived a wandering life; otherwise, they would have been unable to have continued in so rude a climate, where others can hardly bear the winter, sheltered in commodious dwellings; neither could they have preserved the use of moveable huts, if they had not originally been wanderers. Add to this, there are, in the eastern parts of Siberia, about the Jenisei, where the country, according to every appearance and token, has been once
more

more populous, a posterity of that nation in the neighbouring Sajanian mountains, in the Koibals, Kamatschinzes, Matoes, Sojetes, and Karagassians, who all speak the Samojede language. This nation, indeed, does not recollect that it came from the east; but it is natural to suppose, that their troublesome and dangerous mode of living, may have effaced, in a few ages, such a remembrance from their memory.

The most northern part of the district of Berezowa, inhabited by the Samojedes, is divided by the gulph of the river Ob, into two districts; of which the western, or Kamennaja, is bounded by the district of Pufdoserfskaja, lying from Archangel to the source of the river Sob, along the Jugrian mountains, Karfkoi. The other, called Nisowaja, runs eastward from the gulph of the Ob; and is bounded by the district of the Juriakian Samojedes, dependent on Mangasei.

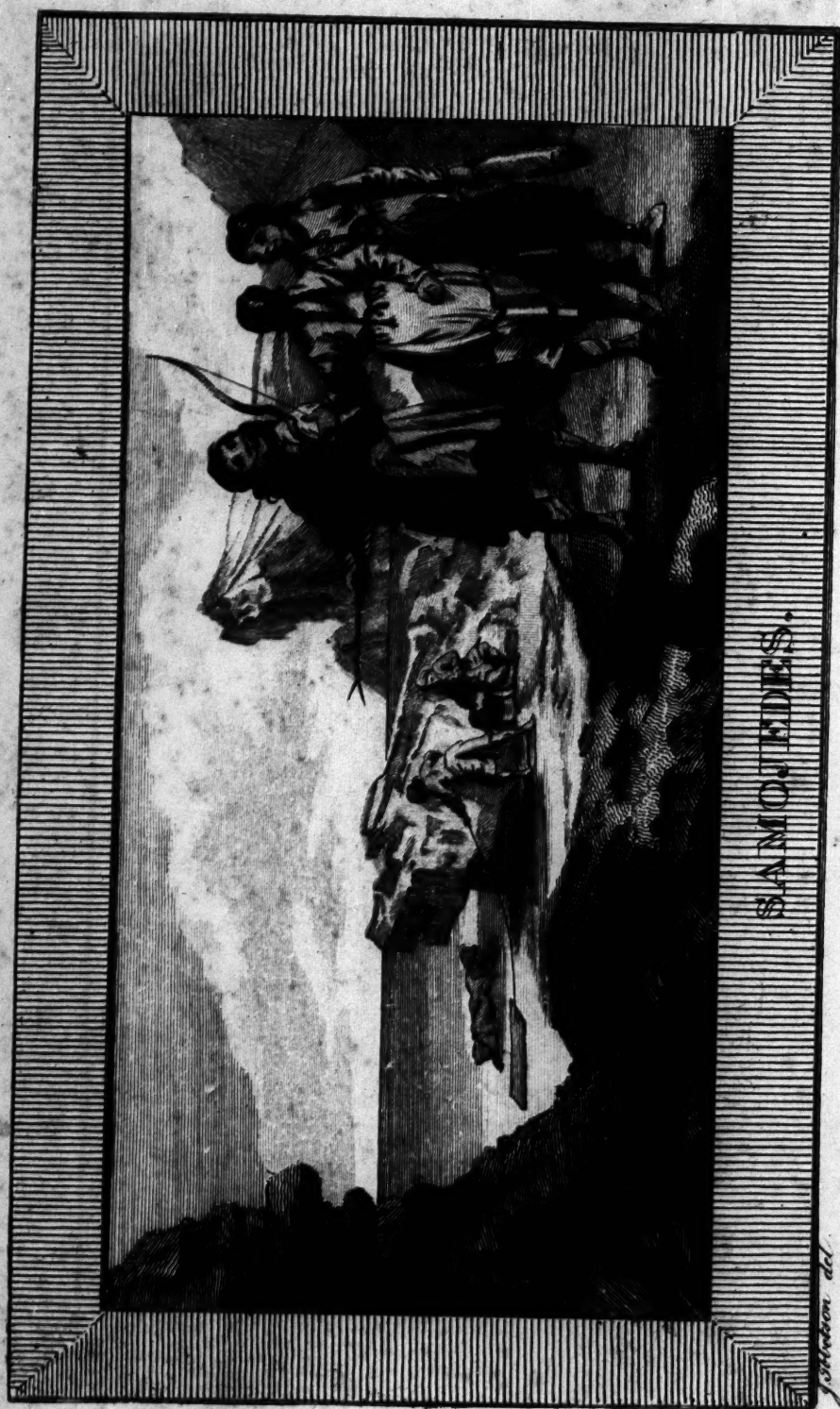
“ The European Samojedes,” says *Tooke*, “ extend
 “ from the White Sea, or rather from the river Mefen,
 “ to Mount Ural. The Asiatic Samojedes occupy the
 “ countries between Mount Ural, and the environs
 “ of the Lena, to beyond the Jenisei; those of Euro-
 “ pean Russia, live separately; those of Siberia, are
 “ settled partly in the vicinage of the Eastjaiks, or
 “ mixed with them. The countries they occupy are
 “ marshy, and full of rocks; so that, from the 67th
 Vol. IV. B “ degree

“ degree of latitude, there are no trees of any kind ;
“ and that cold which prevails in these climates, pre-
“ vents vegetation to such a point, that even the little
“ brushwood here and there to be seen, dwindles away
“ to nothing, as we advance towards the north. Al-
“ though they do not inhabit Nova Zembla, situated
“ over against the mouth of the Ob, nevertheless,
“ to the eastward of the Jenesei, the shores, along which
“ their little settlements extend, reach to the 75th de-
“ gree of north latitude ; for which reason, their vast
“ territories are the thinnest of inhabitants, the rudest,
“ and the most barren and wild, of any of the known
“ regions of the terrestrial globe.”

The Samojedes are, in appearance and language, entirely different from the Eastjaiks ; the latter being, in physiognomy, more like the Russians, and most like the Finlanders ; but the Samojedes have almost the look of a Tunguse, round, broad, and flat faces (very fine in the women) ; pouching, broad lips, a flat and open nose, little or no beard, and black, coarse hair. Their stature is rather short than middling ; but well-proportioned, and more nervous and fleshy than the Eastjaiks. In their manners, they are much more savage, more uncivilized and ungovernable, in their open and distant wilds, than the Eastjaiks, who are much improved, by their frequent intercourse with the Russians.

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SAMOA. IDES.

Johnson del.

H. Harding sculp.

Published as the Act directs by D. G. Fowler, March, 1789.

The man's dress differs but little from that of the Eastjaiks. Some shave their heads partially, some wholly, and some not at all. Some wear but one whisker on one side, and others on both sides, the chin. The women's dress is singular. They go always bare-headed, and bare-faced; and are, in other respects, very impudent. Their hair is braided into two tresses, which hang down behind, and are never opened. In their ears they wear short, bead pendants. The breast and back-pieces of their garments, are made of the furs of young rein-deer; and the rest, pieces of cloth sewed together; the whole bordered with fur, and made to lap over before, and there tied with a girdle. Instead of a breast-pin, they have a large, iron ring, on which both ends of the girdle are tied. They also wear breeches, of died, rein-deer skins; but they do not follow the ridiculous custom of the Eastjaik women, which I have mentioned, and wear the willow-tent, and worop. In this dress, the Samojede women remain day and night; but the men sleep, without any cloaths; and, but for these breeches, would be quite naked.

As the Samojedes live an unsettled life, both in summer and winter, and are always roving about with their tents, covered with rein-deer skins, in woodless plains, their uncleanness is not so observable in winter, as among the stinking Eastjaiks; yet they are in no wise less filthy in their persons, and manner of eating.

Each Samojede keeps his own rein-deer, and he and his family, watch them themselves; the more wealthy ones hire poor people, as shepherds. These domestic animals are chiefly employed to transport their tents and effects, on sledges. They do not know how to milk them, and their numbers are too small to kill them; indeed, their possessors are too covetous to do it. Their chief living is hunting, like many nations of North America; especially that of wild rein-deer, which they catch in many different ways, as shall be mentioned below. The wild rein-deer furnishes the Samojede with every necessary he wants, *viz.* food, roofs, spades which they make of the horn, clothes, and sinews for thread, &c. &c. When they live near the sea, they have sufficient subsistence from the sea-bears that come on shore, dead whales thrown up by the waves, and other animals, which they eat indiscriminately. "Dogs, cats, ermines, squirrels, and snakes, in short, whatever they can kill, or find dead: nothing comes amiss to them." They sometimes fish in the gulph and lakes, with small nets made of willow-bast, and ropes of willow-rods. In autumn, they hunt ice-foxes, which are not only caught by the men in traps, and sometimes pursued, but even dug out of their holes by their wives, and killed. There are wealthy Samojedes, who, for the sake of fishing, will take up their summer-abode on the river Ob, and leave the care of their flocks to their children, and shepherds; yet, when the time of hunting approaches, will return

to their old way of living. When a Samojede has killed a rein-deer, nothing is lost. They first cut off the animal's ears, (this is done on the spot where he is killed) and throw them away, as an offering to their gods, to obtain, future, good luck in hunting ; the leg bones are taken out, split with a knife, and the marrow is eaten raw: so do they eat raw the warm and bloody brains, and consider them as a great dainty. The eyes are buried in a certain spot; and no woman or girl is suffered to pass over this spot, lest it should destroy their success in hunting. In the spring, when the rein-deer has new horns, which are knotty and rough, they will eat these horns, only singeing off the hair, and even the old horns they will bruise and boil, and make strong glue of, by mixing it with the blood of the same animal. When more families are boiling, for they have but one kettle among four or five families, the rest of the meat is boiled, and every one eats his portion of in his own tent. The wife, however, cannot eat with her husband, but is contented with what he leaves.

The female sex is in general used worse by the Samojedes than the Eastjaiks. They have every domestic business to perform, to put the luggage on the sledges, &c. and notwithstanding they are quite slaves to their husbands, the latter are continually scolding and cursing them except a few evenings in the year, when love,
for

for a moment, softens their savage breasts. Notwithstanding this, the women are considered by their husbands as impure creatures. When a woman has erected a tent she dares not enter it, till she has smoked herself and every thing she sits on, and even the sledge she carries into the hut, with rein-deer hair. When she unloads the sledge by untying the cloths upon it, she cannot do it from above, but must creep under the shafts and do it. So on a journey, no woman can cross a train or row of rein-deer sledges following each other, but must either run round the whole, or creep underneath the shafts. Even in the hut a staff is erected behind the fire, the limits of which she dares not pass, for they deem the fire sacred, and think a woman going round it would profane it. To do her domestic work, if she wants to go from one side of the hut to the other, she must go round about. For the Samojedes absolutely believe, that if a woman is at liberty to go about the whole tent, a wolf will certainly devour a rein-deer the same night, and the Eastjaiks who keep rein-deer have adopted the same superstitious notions. For no woman or marriageable girl is suffered to eat of the head of a rein-deer. In the time of their menses, they are plagued beyond measure. They must often undergo purification by smoking themselves with rein-deer hair, or castor, nor are they suffered at such times, to dress any food for their husbands, or hand them the least thing. It is the same after lying-in; the husband does not cohabit with his wife for two months. At this period,

riod, she is not to eat any provisions fresh-killed, but must put up with old provisions ; but the worst of all customs is this : the least pain in child-birth causes an immediate suspicion that she has had some illicit connection with other men, and she is therefore left to suffer, in order to extort a confession from her. A European dame would despise this, but the poor Samojede, in order to have assistance, will confess an intrigue, she was, perhaps, never concerned in. This confession however, has no bad consequence. If the delinquent be a near relation, the woman does not name him, but the husband immediately guesses the person, and makes him accountable whether innocent or guilty. If it be any one else, she names him, and he is called upon to defray the consequent expences of that assistance, he put his friend to, without being applied to for it.

When a Samojede wants a wife, he looks for one in some other family than his own : he never cares for beauty, but chooses one equal to himself in rank and property. Having appointed a negociator of the business from among his own friends, whom it is customary to reward with a rein-deer for his trouble ; with this man and his relations he goes to the habitation of the girl's father, and being arrived, no one presumes to enter the hut, but ranging all their sledges in a row, each man sitting on his own, while the negociator waits upon the father of the young woman,

man, and enquires whether the young man can have her. If the father refuses, which is but seldom the case, he gives the negociator a basket, which is the token of refusal and nothing more is said, the whole suite return as they came; but if the father accepts the proposal, the negociator settles the kalym or price to be paid, which is attended with more difficulty than among the Eastjaiks, for such shall be the covetousness of the father, that he will keep the whole train a long time on their sledges, that he may get as much for his daughter as he can. The kalym generally consists in a variety of clothes, household necessities, rein-deer, and little matters purchased from the Russians. The father indeed can keep but part of this kalym to himself, it being usual to give some of it to his relations.

As soon as the youth has paid the kalym, the father-in-law loads him and his company with rein-deer meat, and during the feast, the young man and the bride's father sing to each other, the father advising in his song the son to love his wife, and the son recommending himself as well as he can to his new father. It is then settled, when the bride's portion is to be paid, and when the bride shall be ready to give her hand. For a father always gives with his daughter in marriage, a certain quantity of clothes. On the day appointed, the bridegroom
waits

waits on his bride with a number of strange women to fetch her. On this occasion, small presents are demanded from those relations that share the kalym. The bride is then forcibly placed on a sledge by these women, tied on, and all the sledges with the presents and gifts (the first three or four of which, the father must cover with good cloth, and the rest with rein-deer skins) then set off; the bride's sledge first, and all the rest following, and return to the young man's hut, where it is the business of the bride to make his bed, in which she sleeps by her husband, but undisturbed for the first month. Both Eastjaiks and Samojedes make the bride's mother a present, if it turns out that her daughter when married, was a virgin.

Some time after marriage, the young wife pays a visit to her father, and stays with him a few weeks, during which time, she has the liberty to receive her husband. At their taking leave, the father must make her a number of presents, and do the same at every visit; so that the young woman for a length of time shall have no occasion to apply to her husband for any thing. In cases of divorce, the kalym is returned. Should the woman die soon after her marriage, the widower claims a return of the kalym, if respect to the deceased does not prevent it.

The Samojedes have very easy labours. The after-birth is either buried, or placed in some remote place, where no cattle, or wild animal, can approach it. At the time of a woman's delivery, her husband keeps a good knife ready, with which the attendant on the mother cuts the navel-string of the child, and keeps the knife as a reward. All present take the child as soon as born, and caress it. Like the Eastjaiks, they lay it upon rotten wood or soft moss, and so tie it, that the mother may readily carry it at her back.

When a boy is two years old, his father gives him a name, which he keeps till he is fifteen, then gives him another of his own choosing, or borrows one from some friend, after the death of their relations; for the names are sacredly kept in the family, and should a Samojede give his son the name of another person, without the consent of that person's relations, it would expose him to bloodshed. A girl never has any money. When married, her husband calls her *Ne*, that is, *wife*; and she calls her husband, *Chosowa*; that is, *man*.

The names generally given to boys, have some significant meaning, as for example: *Chanchara*, sledges and larchwood; *Nerme*, opening in the ice; *Laatscha*, hillock; *Lakeer*, hilly-land; *Naemale*, broken bones; *Warpts*, light-headed; *Eptukai*, goose foot; and the like.

The Samojedes inter their dead very soon, have no certain burial-ground, but carry the corpse to a height or hill. They dress the body in as many of its new clothes as they can put on, laying what is left about the corpse, and put the head into a boiler, from an opinion that, after the head is decayed, the soul will there remain: all this done, they wrap up the body in the cover of a tent, of rein-deer skins, bind it round with ropes, and drag it out of the tent, head-foremost; not out at the door, but from under the covering of the tent the man inhabited, which they raise for the purpose; for they idly think, if it is taken through the door, the deceased will return, and soon fetch away some other of the family. When brought to the place of interment, if in summer-time, they dig a very shallow pit, not above eighteen inches deep, cover the corpse with wild bushes, and then throw the ground upon it. In winter-time, they erect a hut with timber and bushes, place the deceased in it, give him an axe, knife, bow and arrows, tobacco, a pipe, spoon and cups, and then leave him. The rein-deer that drew the corpse are killed, and put, with all their furniture, into the grave. Rich people kill also those rein-deer with which the deceased used to hunt; and the whole, in winter, is covered with straw; in summer, with moss and straw. Of course, Samojede graves are a banquet prepared for ice-foxes, hyenas, and other wild beasts.

During the interment, they send for a magician, who is often fetched from a great distance, in honour of the deceased. On such occasions, these magicians have recourse to the drum, and put on a particular kind of robe, ornamented with figures, in iron-plates. Their business is, to persuade the spirit of the dead not to molest those he has left behind him, nor fetch them away; but to leave his lucky hunting-days to his relations. At these times, they sacrifice a rein-deer, and dress it on the spot; but neither the wife nor husband of the deceased is at liberty to eat out of the common boiler, without being first purified by washing and smoking themselves with castor. Should a Samojede pass the grave of an ear relation, even ten years afterwards, he must sacrifice a rein-deer, in memory of the deceased, and eat it with his attendants, leaving the head and horns upon the grave. The name of the deceased is no more to be mentioned, but by allusion or circumlocution; he that would pronounce the name, would become a declared enemy of the relations: but, after a length of time, the same name may be revived in the second or third generation, and given to children, to keep up its remembrance.

Mourning for the dead, consists in not tying up their fur-boots, nor girding their bodies with willows; undoing the tresses of the hair, letting it go dishevelled for some time, and afterwards braiding it,
for

for life, into three tresses, letting the third hang on one side over the ear,

I must not omit to mention, that many Samojedes, especially magicians, are occasionally panic-struck, partly owing to lax fibres, the effects of a northern climate, and their manner of living, and partly to fancy, weakened by superstition. We see this also among the Laplanders, Tunguse, and the inhabitants of Kamschatka. Major Islenief assured me, he had heard this among the Jakutes; and, in a less degree, I met with it among the Tartars, about the Jenisei, and the Buscats.—We have read of the same among the Laplanders. An unexpected touch, a sudden call, whistling, or a fearful and sudden appearance will throw these people into a state of fury. The Samojedes, and Jakutes, who seem more to be affected in this way, carry the matter so far, that, forgetting what they are about, they will take the first axe, knife, or other offensive weapon that lies in their way, and would wound or kill the object of their terror, if not prevented by force, and the weapon taken from them; and if so interrupted, will beat themselves about the hands and feet, scream out, roll upon the ground and rave. The Samojedes and Eastjaiks have an infallible remedy to bring such persons to themselves; which is, to set fire to a rein-deer skin, or a sack of rein-deer hair, and let it smoke under the patient's nose; this oc-

casions a faintness, and a quiet slumber, often for the space of twenty-four hours.

In the district of the river Ob, Mr. *Surjef* saw a female magician, who had quitted her way of life, on account of her advanced age. This woman was not only terrified by whistling, but even by the noise of the wind. There was also, among the Samojedes who accompanied him on his journey to the frozen sea, a woman, who was terribly frightened at every trifle. In 1772, in their travels through Mangasei, they met with a young Samojede forcerer, whom Mr. *Surjef* no sooner approached, than he imagined he was going to be killed; and, on holding a finger out to him, he seized it with both hands, and took that opportunity to run off: however, after many persuasions of the interpreter, that no harm was designed him, he recovered himself. They then put on him a black glove, and immediately his eyes rolled; he stared stedfastly at the glove, and fell into such a fit of madness, that he would have committed some murder, with an axe that lay in his way, had it not been secured. Disappointed of his weapon, he ran about raving, screaming, and shaking his hand, in order to get off the glove, which he took to be the claw of a bear, and which he was afraid to touch with the other hand, till the bye-standers laid hold of him forcibly, and pulled it off, on which he recovered.

The

The Samojede magicians are skilfull in their art : besides the drum, which they use as do the Laplanders, they wear a particular dress. According to Mr. *Gmelin's* account, they are tolerable jugglers. Some have the art of plunging a knife into the body, without making a wound ; and apparently wringing off their heads, by fastening a cord round their necks, and suffering two persons to draw it tight, and afterwards setting it on again. But these tricks are seen only among those magicians who require but little art to deceive their countrymen ; and, indeed, to speak seriously, such a Siberian juggler, would cut but a very indifferent figure at a European fair,

I could learn nothing authentic about their idols ; yet I know that each man has, in his house, a pagod, which is often some particular stone, or some other inanimate body, which the Samojede ties upon his sledge, and considers as sacred,

I will say a few words about their amusements, and then leave them. When many assemble, upon any joyous occasion, they divert themselves with fighting, and running over certain limits. They also dance with their wives, by couples, in circles ; throw themselves into a variety of attitudes, and make a number of grimaces, all to musical measure ; and often, for want of music, will keep time by snorting, and other nasal

nafal sounds ; in which the women, in the same way, bear a chorus, and reply.

I will proceed to their fisheries, and manner of hunting, about the river Ob ; equally practised by East-jaiks and Samojedes.

Tooke, who speaks from *Gmelin*, is a little more particular respecting the persons of the Samojedes. He says, “ The men are about five feet high ; some few
“ are seen, only four feet. They seem all of a heap ;
“ have short legs, small neck, a large head, flat nose
“ and face, with the lower part of the face projecting
“ outwards, large mouth and ears, small black eyes,
“ but wide eye-lids, small lips, and little feet ; their skin
“ is of a deepish yellow hue, and they have seldom any
“ beard at all ; their hair grows in very small quantity, but, small as it is, both sexes take great pains to
“ eradicate it every where, except on their heads, where
“ it is black, and has the appearance of silk. The
“ women are shorter than the men ; have a more slender shape, and are softer in their features. At the
“ same time, they are far from handsome ; and a
“ pretty female is as extraordinary as a fine man ;
“ their breasts are small and flat, and their maturity
“ very early ; many of them being mothers at twelve
“ years of age, and sometimes at eleven : they are not,
“ however, very prolific ; and, after thirty years of
“ age, seldom bear children.

“ The

“ The constitution of this country has always been,
“ and still is, that of the infancy of the world. They
“ never had an idea of any prince, or superior, except
“ the elders of their branches. Their historic songs
“ perpetuate only the remembrance of some ancestor,
“ who gloried in his courage and skill in hunting, or
“ who was the founder of their families, or, of their
“ magic priests. Since their conquest by the Rus-
“ sians, little forts, or places of confinement, have
“ been built in their territories, to keep them in order,
“ and receive their tribute; and, at first, they were
“ bold enough to oppose these establishments; but
“ they now pay their tribute, or taxes, with great
“ cheerfulness, and at the places destined for that pur-
“ pose. This moderate tribute is left to themselves
“ to proportion, and consists of the skins of wild
“ beasts.”

Having now described the persons of the Samojedes, let us speak of their fisheries, and manner of hunting, in and about the river Ob; in which the Eastjaiks and Samojedes agree.

There is no large river in all Russia and Siberia, where such a quantity of all kind of fish of passage comes up from the sea, as in the Ob. Of whittings (*Coregoni*), it contains several unknown species; but trout, salmon, and several other sorts of fish, caught in other large rivers of Russia and Siberia, are wanting here;

here; which may be ascribed to the nature of the water, its flow course, and the sliminess of the ground. The Siberian omul (*Salmo autumnalis*), found in the Jenisei, Angara, Baikal, Tubal; and the lake Madshour, is not seen here, though it is common in the frozen sea; nor is the little trout (*Salmo eriox*), abundantly caught on the Jugrian coast, and on the river Petschora, to be found in the river Ob; but the sturgeon, and huso, who like a soft ground, are larger, and more abundant, yet of a worse taste in the Ob, than in such rivers as are stony.

The fishes of passage peculiar to the Ob, and seen no where else, are, the mukfun (*Salmo lavareto affinis*), the soroch (*Salmo wimba*), the nelma, large quabs, pike, perch, shad, and barbel. The mukfun, nelma, and some others, crowd up the Ob in spring, as soon as the ice is dissolved, reach Berezowa about June, and then proceed further into the Jenisei and Tom; but, in September, chiefly return into the ocean, before the river-water, under the ice, begins to stink. This disagreeable change of water, only happens in little, slow-flowing rivers; not in the larger ones, in the district of Berezowa, nor even in the Ob, after the month of December. Some rivers, which flow from the mountains into the Ob, and have strong and rapid streams, as the Sob, and others, are free from this defect; and, of course, are fuller of fish in winter-time. But, in the Ob, fish commonly live in such places, where the sweet
water-

water rivers empty themselves, and where fresh and strong rivulets run into it. In such places, the finny tribes assemble so plenteously, that they are caught, in quantities, during the whole winter. Where there is foul or dead water, it does not freshen and become sweet till spring, when the melted snows adds to it.

The spring-fishery in the Ob does not begin before June; when the river opens again, and shoals of fish push their way up, and fill all its branches. Just at this period, the Ob is too deep and broad to be fished; and, it has been known that at such flood-times as happened in 1770 and 1771, the Eastjaiks, who have made no provision, have been almost starved. Those who are prudent, make a greater provision than merely for the winter; and find themselves very well rewarded for their care.

Besides drag-nets, made use of from June to October, the Eastjaiks have various, other ways of fishing. One is, with a net, called *Kylidan*. It is like a bag, ten feet broad, and seven long: its lower edge is stretched upon a pole, at the middle of which a stone is fixed, in order to sink it, flat on the ground. Near the stone is fastened a rope, which goes through a ring fastened on the upper edge of the net, which the fisherman rowing takes hold of, and drags the net after him. A few inches below the upper edge of the net, are some strings

strings fastened to it, which the man holds between his fingers, and hereby feels when any large fish strikes against the net; when he immediately lets go the string, and pulls the rope tight, which draws the bottom and top of the net together, and imprisons all that is within the bag. With these nets they catch, from June to September, sturgeon, white salmon, quab, mukfun, and schagur.

Through the summer, they also catch a quantity of fish, with garths and baskets; and also, in winter, when the ice is solid; and they use ropes, with hooks on them, called snafts, as in the Wolga. They fish, at night, with fish-prongs, in the side-rivers, by the light of kindled birch-bark, erected upon poles; and, when the rivers are shut up, will make openings, with huts over them, and let down baits, cut out in wood, and made to resemble small fishes; in doing which they are clever, and, when these baits draw fishes towards them, catch them with their prongs. Such a quantity of sturgeon is caught at Beresowa, that a pud weight will not sell for more than 40 copecs, and the fat at 50, per pud; and never for more than a ruble.

There is a kind of dolphin met with in the gulph of the river Ob, and is occasionally seen at certain distances up the river, in pursuit of fishes of passage. These are the fish, which the Russians call Bjelugas; which Mr. *Gmelin* has given some account of; and
which

which are mentioned by *Muller*; and also, by Professor *Kraschenini*, in his natural history of Kamschatka. *Anderson* and *Crantz*, in their accounts of Greenland, give a particular description of this dolphin, which they call the White Dolphin; and what they say of its teeth, corresponds with what I have myself observed in the head of this fish. Nothing is more true, than the suppositions in *Muller's* Collection; that the sea bjeluga, is no other than the white dolphin of the Greenlanders. Mr. *Surjef*, four miles beyond Obdorskaja, found several heads of this fish, in a pagan place of sacrifice. From a variety of accounts, which I have collected from those who are well acquainted with the sea-bjeluga, and from a head which I received quite entire, I am capable of resolving every doubt respecting this animal; and I take upon me to aver, that this marine bjeluga belongs to the genus of dolphins; having, like the whale, two heart-pits, lungs, warm blood, external genital parts, and teats; and that it cannot have any communication with the bjeluga of the Caspian, and Black seas; nor have any similarity to it, but in the name, form, and white colour. The white dolphin resembles a quadruped so much, particularly the sea-dog, that the Samojedes take it rather for a water-animal, than a fish. It is never above 21 feet in length; its head is oblong; and, in respect to the body, very small, conically flat above, and about the snout obtuse, soft, and round. Its eyes are small, round, and project from the head. It has no nostrils in the snout, but has a vent-hole in
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the forehead, through which, when it swims on the top of the water, it throws up a great deal of water, as a spout. Its ear-holes are very distinguishable ; its mouth, with the lips, not much wider than a rein-deer, which, if it wants to bite, it can open wide, and both jaws have, on each side, a row of short, and very blunt, teeth. The distinguishable mark of this fish, from all other of its genus, is, that it has no gills. When it swims, it bends its tail like a crab, beats the water impetuously back, and thus darts forward, as rapid as an arrow. Its skin is white, moist, without hair, as soft as human skin. Underneath its belly, the female genitals are very visible, and close by are two teats, like those of a cow, full of white milk. The penis of the male is about ten inches long, without cartilage or bone, thick as one's arm, and pointed at the end like that of a bullock. The Samojedes say, its flesh is as black as foot; and the whole body is covered with a white sward: the young ones are more black, or grey, than the mother, and follow her swimming. In general, white dolphins gather, in little flocks, together; and when they are observed in the gulph of the Ob, the Samojedes assemble, in large numbers, drive them on the shallows, and kill them. Dr. *Baden*, resident-physician of the regency of Tobolskoi, dissected one, and compares its intestines to those of a calf.

Hunting is very general in all the districts situated north of Beresowa. The animals that abound most in
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the woodless wilds, the farthest north, are blue and white ice-foxes, common foxes, white and grey wolves, hyenas, and rein-deer. In the adjacent, woody parts, elks, lynxes, sables, ermines, otters, beavers, and a few black bears; and, on the sea-coast, white bears, but not so abundant as on the ice-fields of the ocean. About Obdorskaja, they are very rare; but not so rare about the Jenisei, as far as Mangasei. It having been observed, that ice-foxes follow the mice, in certain years, to eastward; they are at such times found, in great quantities, in Mangasei; and the hunting then has not been so good upon the Ob.

Their methods of catching these animals, are the same as those practised in Russia and Siberia. Besides shooting-instruments, and catch-clefts, they have self-shooting bows, for bears, lynxes, wolves, hyenas, and the common game. Wolves and foxes are caught with poisonous baits of crow's-eyes and sublimate; and, by fall-traps. Of the latter, the Eastjaiks make a kind, which they call *Kuromsefs*, set up with a block, on which the bait is tied; and the animal endeavouring to move the block, to take off the bait, is killed by its fall. Such traps as are used in Russia, for ermines and pole-cats, are made use of by the Samojedes, but of a larger size for ice-foxes; and sometimes they fix self-shooting bows, on forks, in the deep snow, against snow-hills, in which such foxes hide pieces of fish.

Sables

Sables are of little value here ; and are either shot by the peasants with arrows, or driven into nets. If found sleeping in their holes, a bag-net is placed before them, into which the sable is driven, and entangled.

Beavers are sometimes seen in crowds, about the uninhabited districts of the rivers ; but, in general, are found single, in woody borders. Hunters go in search of their holes in winter ; and, having found them, encompass them with pales on the water-side ; then open the vent-hole, large enough to let a dog in, who takes the beaver by the teeth, and he is then drawn out by the hunter, by the hind-legs. Others are pursued and killed, sometimes by dogs, and sometimes by spring-bows, placed by the water-side, that go off and shoot the animal, when the bait fixed on it is touched. They encompass woody places with pales, leaving here and there a way out, and fix snares, and spring-bows, at such openings. They catch elks, and rein-deer, by the same method ; but in the marshy plains, near the sea, where this cannot be done successfully, the Samojedes have found out another method of getting at the wild rein-deer, who rove there in winter, in herds of ten, a hundred, and two hundred at a time. When there are many Samojedes together, and they see such a herd of wild rein-deer, they place some tame ones, and sledges, at a distance, upon a piece of flat, high land, to windward, and stick from thence in the snow,
towards

towards the herd, long sticks, with goose-wings tied on them; and which the rein-deer easily move, at the distance of ten fathoms from each other: and, on the other side, to leeward, or under the wind, about 50 fathoms from the sledges, they stick poles as before, and continue them on till they have passed the herd, which are all this time searching for food underneath the snow, too attentive to look about, and prevented from that by their great beams. When all is ready, the Samojedes divide; part hide themselves behind the sledges, and part, called *Wardar*, lie concealed, with bows and arrows, in the opening on the lee-side, near the sledges; others, at the same time, run, and drive the herd towards the winged poles, which, shaking in the wind, alarms them, and, impelled by fear, they run among the tame rein-deer standing by the sledges. They are soon, however, driven from this place; and, seeing no winged poles where the *Wardar* lie, attempt to force their way through, and there many of them meet their death. But as such a mode of hunting requires a great number of people, they have other inventions, to deceive the rein-deer. Having trained up four or five of their tame, female rein-deer, so as to walk in order with the huntsman, he fastens a long cord about each of their horns, and ties the other end to his girdle, that he may have the command of them, in case of confusion, or disappointment. These female rein-deer have the fawns running about them; the hunter is thus surrounded by the whole, and, with this cavalcade, can

approach the wild deer, near enough to shoot the one he likes.

In autumn, at rutting-time, the Samojedes will take a strong buck, and go with it in search of wild herds; and, meeting one, will wind a cord about the buck's beams, or horns, extending it from one horn to the other, and there fasten it: so armed, he is turned loose. The hot animal rushes among the herd, and is there attacked by the wild buck, who, during the contest, is entangled by the horns, in the ropes fastened about those of the tame one; when the huntsman runs in, and kills him. They catch their deer also with great ease, when they come down, in summer, to the cool brooks; and, in winter-time, in deep snows, by pursuing them in their snow-scates.

When on the sea-coast, the Samojedes employ themselves in catching seals, or sea-calves, that prowl about the cliffs, or ice; and sea-dogs, that come up from the water, through small holes which they make in the ice, by constantly lying on one spot. The Samojedes lay a board near such holes, to which they fasten a rope, and hiding themselves behind the large pieces of ice, till the seal comes up out of the water through the hole, they draw the board over the hole, which prevents its return, and of course it is soon killed. (See plate Samojedes.)

Having

Having described their fishing and hunting, I must not omit their fowling, which begins in spring, in the district of the river Ob. As the snow melts, they look out for such spots, where the snow-water forms little lakes. As the fowls arrive, with the first thaw, and settle in such lakes, they erect small huts near them, where they can lie concealed, and within reach of a shot; and, in order to decoy geese and ducks, they stuff out the skins of geese and ducks with hay, and fix them near this hut; and it is curious to see how wild swans and geese will soar over these stuffed baits, and unfeather them with their bills.

Later in spring, they catch them in flying-nets, hung up in an avenue made through a wood, as I have already described elsewhere: nay, they catch them here in broad day, as the fowlers conceal themselves in huts, erected for the purpose. They catch wild geese, also, on the flat sand-banks, with such a net as fowlers use in England, to catch small birds; for in these northern countries, the people take no notice of small water-fowl, they catch only the larger kind; and the quantity here is so great, that the Russian inhabitants might provide themselves well with it for the whole year, and have plenty to throw away in the ensuing spring, which brings fresh supplies.

I came back to Krasnojarskaja to winter, on the 28th of February, 1772; Mr. Georgi, assistant to Professor

Falk, arrived from Tomskoi, with three other gentlemen, sent by him to accompany me; his infirm state of health, not suffering him to travel on. In return, I was to send one of the gentlemen I had with me, who was to go on from him to Petersburg. He set off for Tomskoi, on the 4th of March; and, by him, I sent to Petersburg best part of the natural curiosities I had collected in the course of the last year. There being nothing now to prevent my prosecuting my intended journey, into the eastern parts of Siberia, and my health being restored, I set out, on the 7th of March, from Krasnojarsk, on my road to Irkuzkaja, a distance of 544 miles; where I removed on the 14th of March. This road is tolerably passable; sometimes we travelled on sledges, and sometimes on waggons. Post-stations are here erected, at proper distances, with horses, and good warm and white, painted rooms, for the reception of travellers; and the country is all along inhabited by Siberians, or Russian colonists. That I might miss nothing worthy notice, or observation, I left Mr. *Kaschkaref* at Krasnojarsk, to explore the vegetable kingdom, in the neighbouring mountains, as the spring opened; and sent Mr. *Surjes*, as he was more accustomed to travelling in the north, to Jeniseikaja, and from thence, by water, to Mangasei, and further northwards, to get all the knowledge he could of the Siberian productions in the frigid zone.

We reached the town Irkuzkaja on the 14th at eleven at night; our horses being very much fatigued. The
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many curiosities I had here to see, the many useful accounts I had to collect, respecting the unknown district on the opposite side of the Baikal; and the kind attention of his excellency Lieutenant-general *De Brill*, governor of this town, so engrossed my time for the whole week I staid, that I could not think of giving a description of this fine place; of course, left it to the pen of Mr. *Georgi*, who was to stay here till the ice left the Baikal, which would at least be two months longer; first giving him my instructions, to guide him in the journey he was to take, along the coasts of that sea.

Through the favour of General *Brill*, I shared an uncommon curiosity, which richly deserves mentioning. During the winter, the inhabitants of this town, being out a hunting, found, on the river Wilui, the body of an unknown, large animal, and brought the head of it, with a fore and hind foot, well preserved, to this place. The person who sent it and the annexed account, dates his letter, Jan. 17, 1772; and mentions, that the carcase of the animal had been found in December, about 30 miles up the river, on the sandy borders, about 7 feet from the water, and 28 feet from a higher and steeper border, half-covered with sand; that it was measured on the spot, and found to be $7\frac{1}{2}$ feet long, and its height 5 feet. The whole body had still its natural, thick, leather skin, but had been so decayed, that nothing could be taken off whole, but the head

and feet, which he had sent to Irkuzkaja, as a curiosity. On the first appearance, these parts shewed, that they belonged to a rhinoceros. The head was still covered with its natural skin; and, therefore, the more distinguishable. On the skin was, on one side, short hairs; and, almost every where, the external organization of the skin was well preserved; even the eye-lids did not appear to be decayed. Underneath the skin lay, here and there, a loamy substance, the remnant of some decayed, soft parts. About the feet were, besides the skin, strong remains of joints and sinews. The horn of the mouth, and the hoofs of the feet, were wanting; but the situation of the former, and the border of the skin round it, were like the cloven hind and fore-foot——unquestionable marks of this animal.

Having written a special treatise on this wonderful discovery, which may be found in the writings of the Imperial Academy of Sciences, I shall not repeat the cause, that may have brought such an animal to the most northern districts of the Lena; and so many other remains of strange animals, all over Siberia. I shall only mention some circumstances which occurred to me, and acquaint the reader with the district where these remains were found, and preserved for such a length of time. The country about the Wilui is mountainous, and contains either strata of sand, or limy slates, with some soft layers of loam. Upon the banks are also

also broken stone-coal; of which there must be some bed, higher up the Wilui. The brook Kentendoi, on which is a whole mountain of selenites, and rock-salt, in the neighbourhood of an alabaster mountain, lies 225 miles higher up the Wilui, from the spot where the rhinoceros was discovered. Right towards that spot lies, upon the Wilui, a sandy mountain, whose height is near 15 fathoms; near which the body of the animal was found, tolerably deep in gravel, and was preserved by the frost, as the ground never thaws about the Wilui, to a considerable depth. The warmest, sandy, and elevated tracts, are indeed softened by the rays of the sun, to the distance of some feet underground; but in the vallies, where the earth is mixed with loam and sand, we find, even at the end of the summer, every thing freezes, at a foot deep. But for this, it would have been impossible that the animal should have been so far preserved, whose transposition from a southern, native soil, into the frigid zone, cannot be of later date than the general deluge; as the oldest annals of men speak of no later change of the earth; and to this change, may probably be ascribed this variety of contents in the earth; the remains of the rhinoceros, and the bones of elephants, dispersed throughout Siberia.

On account of the warm weather, we saw now, about Irkuzkaja, the last passage of the snow-larks (*Alauda alpestris*), and black sparrows (*Fringilla flavi-rostris*);

and there was also arriving, a kind of parti-coloured jackdaw, which spends the winter in China, or the warmer part of the states of the Mogul (*Corvus Dauricus*).

The winter-road we were to travel, was over the frozen lakes, and shore of the Baikal; and, in our way, on the 23d of March, a most violent, frigid storm blew behind us, so that the sledge-leaders could not keep their ground, but were blown many fathoms about the sledge, on the slippery ice; and nothing could fix them, or save them from the danger of being blown into the deep chinks between the ice, and being frozen to death, but sticking their knives into the ice, and holding fast by them. These chinks are, in many places, so large, and so deep, that no one durst venture to cross the ice in such weather. As the storm increased, we were obliged to halt, and take up our abode in this cold spot, till the next day, not daring to cross the lake before us. Several persons were here, preparing to catch sea-dogs, which prowls up from the Baikal, to these warmer places, to sleep, bask in the sun-shine, and enjoy themselves. They come up to these animals, readily, in little sledges; before which they extend a white sail, which the sea-dogs take for a piece of ice, and are thus surrounded, and shot with balls. There is generally a beaten road over these lakes, and the sea-coast, in winter; and men will travel it, in preference to one that is less dangerous, but farther round: nay, will even
pass

pass chinks, by putting boards across; over which the horses and sledges will pass.

Approaching nearer the shore of the Baikal, I saw a particular kind of fishing-basket, consisting of a little enclosure of bushes, extending from the shore some feet into the water; at the end of which was another enclosure, that formed two rooms; whose entrance is the angle which each room forms with the enclosure. When any fish approaches the enclosure, they go into these rooms, or places, from which they cannot return. Here I stopped, to put one of my waggons upon wheels, for they were so contrived as occasionally to be converted into sledges, for the purpose of traveling over the ice and snow. We travelled on, at the rate of about 25 miles a day, but with difficulty; sometimes on sledges, sometimes on wheels, but without any material accident; passing many villages in our way, till we reached the town of Selenginskaja, on the 31st of March, where I met Mr. *Sokalof*, whom I had sent forward in the beginning of the year.

The district about this place is encompassed by sandy mountains; and so warm, that spring begins here sooner than in the mountains about the Baikal. On the 20th of February, the air was very temperate; and, towards the end of this month, the snow melted entirely upon the hills; and all sorts of birds of passage were arriving. On the 20th of March I shot the first
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water-wagtail ; and a great many little birds now entered the woods.

On the 3d of April, the snow being entirely melted, I made a little tour, to the distance of 60 miles, up the brook Tschikoi, to see the Mongolian pagoda that was erected here about 12 years ago. I chose this time, being informed, that the three days of prayer, appointed monthly by the Mongols and Burats, are on the 13th, 14th, and 15th days of the new moon ; so that I might see here the idolatry of the Lamas, and compare it with that of the Kalmucks. I reached it on the 5th of April. This pagoda is situated in a sandy plain, and is the largest belonging to the Russian Mongols. Besides the chief pagoda, and six smaller ones, there is here erected a good mansion, belonging to the chief of the clergy of Lama in this district, whom they call *Bandidi-Chambo-Lama* ; and two houses, one inhabited by a military clerk, and the other by a christened Mongol, in the service of the Cossack regiments. There are also, about the north, west, and east sides of the pagoda, several enclosures, in which the principal clergy, if they come here to the service of the temple, erect their felt tents ; some on the ground, and others, on a platform, raised with planks above the ground. All the buildings are of wood, and built by Russian carpenters, according to the direction of the high-priest, Chambo-lama ; who endeavoured to imitate the form and ornaments of the pagodas of Thibet, which
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he had seen in his youth. It would be a superfluous repetition, to enter here into a circumstantial description of these temples; as I preserve these, and other accounts, for a particular treatise on the manners, customs, and religion of the Mongols and Kalmucks, which I mean to publish hereafter.

Kjachta. Twenty-seven miles from this place stands Kjachta, which is the frontier fortress, and centre of all commerce between Russia and China; where there is a guard of custom-house officers, to prevent smuggling. This place is situated in an even, elevated plain, in a wide valley, intersected by the brook Kjachta, and encompassed with high, rocky, and woody mountains; the most considerable of which is called, by the Mongols, *Burgultei* (eagle-mountain); it lies so close to the fortress, on the southern side, as to command the same; and yields a fine prospect in every street, and part of the fortress; and also of the Chinese fortress, adjoining it. Since the last marking out of the boundaries, the Chinese, probably conscious of the advantage the mountain may afford, have claimed it as their own; under the frivolous pretence, of its containing some holy sepulchres of their ancestors; for the Russian frontier-line formerly ran across it. The whole mountain, however, is now left with them; and the boundaries are drawn more to the north, over the bottom. On a western and adjacent mountain, stand the Russian and Chinese marks of boundary. The former is a heap
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of stones and earth, with a cross; the latter, of stones only, set up, one on another, so as to leave a hollow place within, something like a Kalmuck tent, or Tartarian jourt.

The fortress consists of a quadrangle of pallisadoes, fortified on the curtains with four wooden, corner bastions, and batteries. It has three gates; one on the northern side, one on the south, towards the Chinese frontier-town, which I am going to describe; and a third on the west, on the brook Kjachta. Within the fortress, is a fine wood-built church with bells, a spacious bartering-house, with 60 shops, which is to be made still more extensive, on a new plan, and built of stone; in the centre of which is laid the foundation of a little chapel, which is to be built also of stone. Here is also a house for the commander, a custom-house, an old guard-house, and a great number of offices and houses belonging to merchants; besides dwellings for the soldiers. The suburbs which are encompassed with a wooden wall, have not more than about 120 houses, very irregularly built; the gates, however, to this place, are guarded, as are the gates of the fortress.

Kjachta is supplied with nothing so ill as with water; for the brook is, in summer-time, so shallow, as scarce to be above the shoes; and the water so thick, as to be unfit to drink. Many wells have been sunk, but they

they are so impregnated with lime, and a bitter salt, that all the inhabitants, who are people of property, and fond of tea, send for water, with leave of the Chinese, to a spring in their territory.

Their soil is equally bad ; and consists mostly of sand and rocks, quite unfit for gardening. Had the line of boundary been placed a little further, towards China, by a neighbouring brook, as appears to have been marked out by nature, the situation of this fortress would have been better ; there would have been abundance of good water, plenty of fish, and a fertile plain behind it,—advantages which the Chinese, at present, enjoy.

The garrison consists of a company of soldiers, and a number of Cossacks, settled here. The commander is an officer of rank, who decides all little quarrels and disputes, that arise among the principal Russian and Chinese merchants ; and who, in cases of more importance, appeals to a neighbouring court of limits, and the governor of Irkaskaja.

The most opulent inhabitants of Kjachta, are Russian merchants, and commissioners of considerable houses at Petersburg, and other Russian places of note ; and are as civilized and hospitable as in any town in Siberia, except Irkaskaja. Their company would still be more pleasing, if they did not trouble strangers with
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so much drinking of tea ; for every merchant prides himself in producing as many samples of boiled tea, as he has in possession.

The boundaries, between these two countries, are carried on a considerable way, from east to west, with chevaux-de-frize, which prevents cattle being smuggled into either country. Every guard-station westward, as far as the regency of Tobolskoi, and five other ports eastwards, are subordinate to the commander of Kjachta ; but those beyond the mountain, are under the commander of Aschinskaja. It will not be unuseful, nor unpleasant, to those who are fond of geography, to know where the line of partition runs : I will, therefore, point it out. Westwards, from Kjachta, towards the regency of Tobolskoi, follow the frontier ports, in the following order :

Utschinskoi-Karaul, 23 miles from Kjachta, upon the Selenga, in an open mountainous district.

Zagan-Ussunskoi, five miles from the latter, also on the river Selenga.

Bossinskoi, 19 miles further on the river Dshida, which the line follows upwards.

Silturinskoi, 23 miles ; where, on the right, the brook Silturna falls into the Dshida, and the country grows more mountainous.

Chuldazkoi, 19 miles further.

Charazanfskoi, 23 miles ; to which are feveral roads, and where there are many fields in the vallies, which the villagers on the Dfhida do not ufe. Now the mountains become, on the right of the Dfhida, efpecially towards Mongalia, fo very wild and high, that no one can go to the following ports, but on horfeback, and this in fummer only, efpecially in wet weather, without danger of their lives.

Zefkinskoi, 23 miles from Charazan ; where, on the right, the brook Sodski falls into the Dfhida.

Modenkolskoi, 57 miles ; Natschitunfskoi, 50 miles, and thence to Dotofhinskoi, nine miles, a wild diftrict ; after which follows an uninhabitable, impervious fnow-mountain, between the fources of the Dfhida and Dfhonmurin, that to a diftance of 150 miles, to Tunkinfskoi-Oftrog, between Dfhonmurin and the bay of Baikal, or Kultak, not a place could be found for a frontier-post ; and, from Tunkinfskoi-Oftrog, the mountain continues fo high and fteep, as far as to the Jenifei, that they could place but two guard-ftations, in the diftance of 50 miles ; and from thence it is 120 miles, to the firft frontier-post in the regency of Tobolskoi.

Eastwards of Kjachta, the ftations are fituated along the Tschikoi : the firft Kiranfskoi, 12 miles ; the

second Kudarinskoi, 21 miles ; the third, at the distance of 34 miles from the latter ; the next, at 18 miles distance ; and the last, at 10 miles ; where the Tschikoi leaves the frontiers. The line thence runs on the river Mansa ; and the next station is Monshinskoi, at a distance of 112 miles : then follow the high mountains that divide the rivers of Baikal from those of the Amur ; from whence it is 120 miles to the next post on the Balskikan, dependant on Akshinskaja.

I will now give as complete a description as I can of the Chinese frontier and commercial town, which is called by the Russians *Kitaiskaja Sloboda* (the Chinese borough) ; the place having, properly speaking, no name of its own. The Chinese name is *Maimutschin*, composed of Nikanian and Manchurian words, *Maima*, and *Tschin*, or *Tschen* ; the former of which implies commerce, and the latter, a place surrounded with walls. The town lies not more than 60 fathoms from the southern wall of the fortress Kjachta, on a fine and even spot, quite sequestered from the brook Kjachta, and consists of 200 dwellings. In the middle, between the two towns, stand two boundary-posts, 10 feet high ; one with a Russian inscription, and the other with a Manchurian. The Chinese borough has no other fortifications, than a square, wooden wall, which, in 1756, during the last Kalmuck war with the Choitian prince Amursaran, when this frontier-place was threatened with fire and sword, by a Mongol, who revolted against
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their prince Schadir Wang, was erected in haste, with a ditch scarce three feet broad. This fortification, if it can be so called, is flanked by a long space, from east to west, whose longest side is 350 fathoms, and the shortest 200 fathoms. Each wall has, in the middle, a principal gate, opening into the chief streets. Over each gate is a wooden centinel-box, where part of the Chinese garrison, which consists of ragged Mongols, with clubs, stands on guard at night. Before the gates, on the Russian side, are wooden walls, erected in the Chinese way, 28 feet from the gates, to prevent any persons looking into the town. The houses are built in regular, direct lines, and compose two principal streets, from 21 to 28 feet wide, crossing each other in the centre of the place; and two other side-streets, running from north to south. They are not paved, but gravelled; have drains in the middle, and are kept very clean.

The houses are spacious, and each occupies a long oblong place, covered with gravel, and kept very clean; having, to the street, a large long portico, or passage, leading to the yard, with side-doors and store-rooms: the rest of the house consists of dwelling-rooms, store-rooms, and a kitchen. All the buildings are uniform, not more than 14 feet high, without stories, built of wood, plastered with loam, and painted white. The roofs are flat and boarded, and supported by pillars; but the roofs of the common houses, are made

with cross poles, and covered with turf. In all buildings, the windows are large, and made in the European way; but, as glass and isinglass are too dear, are covered with paper, except a few of the dwelling-rooms, of which the windows are glazed. Paper-windows are commonly ornamented with little pictures. One of the rooms serves as a shop, and contains samples of every merchandize the proprietor deals in. The floors are bricked, and the walls papered, as in England; and within are proper screens, to keep off the dust. Round half the room is a broad, painted bench, two feet high, on which the family eats and sleeps. On this bench is also a square, brick oven, two or three feet high, with a perpendicular, cylindrical opening, like a fire-place, in which they burn wood. The smoke from this fire-place, is carried from above, downwards, by a pipe, underneath the bench, and conveyed out of the room into the street, and there carried up in a perpendicular chimney, not raised higher than the roof. This fire-place makes the bench and walls so warm in winter, that if the head is laid next the wall, the person cannot sleep. Within the room is no other furniture than two little, low tables, standing on a bench, on which is always placed a pan of burning coals, which emits no vapour, and serves to light their tobacco-pipes. In a particular niche, screened by silk curtains, are some elegant pagods, drawn on paper, before which, on festivals, they place burning lamps and candles, and a curious cinder-box, made of metal or stone, in which
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the ashes and droppings of the incense-candles are preserved, with many little ornaments, and bouquets of artificial flowers.

Their kitchens surpass the best European ones, in cleanliness and order; and have, besides the broad bench on which the servants sleep, and the fire-place, upon it, two other fire-places, in which iron, or stone-boilers, are fixed. They have nothing particular in their kitchen-furniture, but broad knives, with which they mince and press their meat into moulds, before it is served up. The blades are near six inches square, made of polished steel, with a wooden handle, whose cutting edge is as sharp as a razor: the cook takes one of these knives in each hand, minces the meat without touching it, and then presses it into moulds.

This is all I can say of the Chinese houses. The public buildings of their towns on the frontiers, are no other than the mansion of the Surgutschei, or chief of the merchants, and a little Mahomedan metched, in those places where the Bucharrians live.

One of the pagodas of this frontier-town, is built in the middle of the place, where both the principal streets cross each other; it is in the form of a Chinese tower, through which passengers can pass into both streets; the opening being in the form of a cross. Above this

portico, the building is square, with a covered gallery round it, the roof supported with pillars. In another story, above this, the building is octangular, and has eight bells, which are easily moved with the wind, and give a pleasing sound, and round this part is another gallery, like the one below. In the lower story of this building, stands the image of the god *Tjen*, which, according to the accounts given me by the most enlightened of the Chinese I met with, reigns over 32 heavens. The Manchours call him *Abcho*, and the Mongols, *Tingeru*; that is, heaven, or a god of heaven. It sits, with nothing on its head but hair, encompassed with a glory, like the images of Christ, a straight sword in his right hand, and his left lifted, as if giving his blessing. This figure of the pagod, with the Roman-Catholic images of the Redeemer, is perhaps the cause of the Chinese *Surgutschei* (through whose favour I got a sight of this temple), assuring me, that the Jesuits, and their sectaries, who lived in so great respect and authority at the court of Peking, worshipped it equally with the Chinese. Probably these holy fathers may have given the resemblance of the Chinese *Tjen* to their representations of Christ, to excite more the devotion of their new converts. Near this idol *Tjen* stands, on one side, two youths; and, on the other, a girl, and an old man. In the upper story of the building, is another idol, in a black and white chequered cap, also accompanied by a venerable, old man, and three young people. Neither in this, or the other part of the building,
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are any altars or ornaments, but these round the pagodas. Their temples are only opened on feast-days, and strangers cannot enter without permission; yet the Chinese shew these idols no more reverence than those in the greater pagoda.

The great pagoda is far more splendid and spacious, and stands near the southern principal-gate, before the mansion of the Surgutschei. Strangers may see it almost every hour of the day, by applying to an under-priest, who resides for this purpose in the fore-court, the entrance to which, is fortified with *Cheveux-de-frize*. We are conducted through two, little, elegant gates, divided by a small building. Opposite these gates stands a little, painted theatre, near which are erected on each side two high poles, on which they spread, on festivals, large flags with Chinese characters; and, on some peculiar festivals, on this theatre are exhibited little burlettas in honour of the idols, where the merchants' clerks are the principal actors, the spectators standing in the street.

In the little building between the gates of the first court of the temple, within grates, are two saddle-horses moulded in clay, as large as life, and turned towards the South. One is a sorrel bay, represented as leaping, and the other of a dun colour with a black mane and tail, walking: each as led by two men, dressed like grooms,

and sculptured with great skill. Near each horse stands a yellow, silk-flag, painted with silver dragons, but no further ornaments. Just within the gates of the first court, are two covered scaffolds encompassed with a gallery; on one hangs a large bell of cast iron, pulled by a wooden club, and on the other, two enormous tymbals, like those in Kal-muck pagodas. There are also, here two other front buildings, that serve as dwellings for the servants of the priests.

From this outward court, we enter through one large and two little painted and carved gates, into the innermost temple, which has small buildings on both sides, divided into pagodas, like alcoves with grated doors, whose walls within are ornamented with pictures representing the actions of the Gods; thence we go to the hall of the temple, which, like the temple itself, is surrounded with pillars, varnished, gilt and carved with an elegant, Chinese roof, a gallery, and little bells hanging round it. This hall represents an armory. In it, along the walls, on ledges or scaffolds, are all sorts of gigantic and ancient arms, and warlike emblems, as spears, scythes, broad blades fastened on many spear-poles, morning-stars, shields, banners with hinds and dragon's heads, elegantly gilt. Opposite the fore-door is an enormous, yellow flag embroidered with silver dragons and leaf-work, underneath which, stand all kinds of altars skreened, and
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several oblong tables standing on pedestals, with Chinese inscriptions. From the gate behind this place, passing a court about ten fathoms long and five broad, we come to the temple itself, through a short, uncovered gallery, decorated with flower-pots. In the gallery before the temple, supported by a row of pillars, stand, right and left of the entrance, at some distance from the gates, two bordered tables, of black slate, seven feet high, on which, is engraved a long detail of the foundation of the temple. Before the pedestal of the western table, there is, in a small case, a little, frightful image, about six inches high. The temple within is beautifully ornamented, and exhibits, on the walls, many warlike adventures and marches of the chief idol. All the idols are modelled in clay, skilfully executed in gigantic shape, and placed on pedestals four feet high, on three niches, which occupy the whole northern wall. The niches are decorated with a great deal of carving and gilt ornaments. The chief idol that occupies the niche in the centre between two pillars, wreathed with gilt dragons, is Gedsur or Gessur Khan, called by the Chinese *Coujil*, or the first and eldest, by the Manchours *Guanloe* (the chief god), and to his history the above-mentioned horses allude. This figure, represented splendidly sitting and dressed, has a gilt beard, a crown on his head, and is in size four times as large as a man. His cloaths are not modelled in clay, like the rest of the idols, but are

made of silk, and elegantly formed. He holds, in his hands, before him a board, as if reading with earnestness. On his right and left are two little, female figures, representing children of thirteen years of age, one of whom, holds a paper roll. Before this figure, which represents nothing more than some peaceable prince or judge, lie, on the right, seven golden arrows, and on the the left a bow. The Mongols and Kalmucks, do not worship it as an idol, but acknowledge it to be some great hero, who lived near the source of the river Choango, and who, like the Bacchus and Hercules of eastern Tary, vanquished many monsters: and they have in their language a long history of his heroic deeds. Before this idol, is a spacious place encompassed with shrines and in the midst stands an altar with strips of narrow silk, hanging over it, as in Mongolian temples. About the altar, are four, standing figures in couples, turning their faces to each other, representing ancient counsellors and generals of the deified Gessur Khan. All the figures are of Colossal size, but not so large as the idol itself. Those that stood next these Pagodas, were dressed like judges, and held boards in their hands, like the Gessur Khan; one had a white beard, and seemed as if singing, and of the two others, one on the left was dressed in armour, wore a kind of turban, and carried a large sheathed sword on the left shoulder, the handle upwards; the other was cloathed also in warlike dress,

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very corpulent, with a horrid, red-brown face, having in his right hand, a spear-pole with a broad blade at the end.

In each side-division are two idols seated, one in a military dress, and one in that of a Mandarin. All four shorter than Gessur Khan, but still of gigantic size.

The warlike figure on the right, represents the god Masuang or the Otschirboni of the Mongols, whose very look is frightful; it is habited in armour, and has a looking-glass on its breast, one eye in its navel, and on the head three faces of such a dark-brown colour, as to be almost black. It has six arms, two of which, hold bent swords across the head. The next figure on the right, has also a looking-glass; the next on the left, something square, resembling a piece of ivory, but in its hands, a bent bow, as if going to shoot.

The god that sits near him, is called by the Chinese *Zausching*, or the gold and silver god, and by the Mongols *Zagan-Dsambola*. It has a black cap on the head with two obtuse corners, in its hand a box filled with jewels, and is dressed in rich, Chinese robes of state. On one side stand two small figures, one of which held a branch of a tree. Two similar figures accompany also, the former, one having an
arrow

arrow in his hand, and the other an animal. In a division on the left, is the god Chusko, or in the Manshour dialect *Chua-aschan*, whom the Mongols call *Galdi* or Fire-god, with a frightful, fiery face, in complete armour, holding in his hand a drawn sword, and, though sitting, appears as if suddenly rising. One of his satellites is represented as if crying out, the other, bearing in his hand a bird like a duck. Another idol on this side, is the god of bullocks, Niu-o. He is represented as quietly sitting in Mandarin robes, a crown on his head, and, like all the preceding ones, with a round looking-glass on his breast. The Chinese take him to be the same with the Jamandaga of the Mongols. His Manshour name is said to be *Chain-Killowa*, but the Mongols call him *Bars-Batir*, (Tyger-hero). The Chinese are so suspicious, that the most affable will refuse to give you the names of their idols, and if, they see any one attempt to write them down, will give them a fictitious name; of course, I cannot take upon me to warrant all the names I here give, particularly those of the Chinese.

The idol Niu-o has his table also, on which they serve him on festivals, with all sorts of baked meats, dried fruits, and other dainties, besides other victuals, even meat, and whole carcases of sheep. Before him are placed urns, frankincense, wax-candles, and lamps, some of which, before the principal pagod, are kept burning night and day. Among other things

things we see a vessel resembling a quiver filled with a great many long, flat sticks made of split canes, upon which are written little, Chinese mottos, which foretell the fate of any one the ensuing year, that shall draw out an arrow from the quiver, on new-year's-day. At the east end of the table lies a hollow, wooden, black, varnished helmet, on which those who assemble for the sake of devotion in the temple, knock with a beater. No stranger dare knock this helmet, though he is allowed to touch every other thing on the pagoda, and examine the idols as near as he pleases.

There is very little to be said of the rest of their public buildings. The house of the Surgutschei or director of the merchants, stands on a great deal of ground, and is very neatly furnished, but has nothing peculiar, except two flag-poles erected at the gate, which are its distinctive marks, and the solemn tribunal which stands in the hall. The quarter where the Bucharrians live, is in the south-east corner of the town, where they have a little, plain metsched or chapel, built of wood. The Bucharrians, who imitate the Chinese in their dress, are badly and shabbily lodged, notwithstanding their considerable commerce with the court of Peking, which is supplied by Bucharrian merchants, who come here annually for that purpose. Whatever goods such a Bucharrian merchant or commissioner from Peking wants to buy, cannot be sold to any other Chinese merchant, on pain of severe punishment,

punishment, till the former has accomplished his purchase; though the other should offer a much higher price.

We will now speak of the Chinese themselves, and of the trade of that nation. The merchants who reside here, are chiefly Nikanians, or natives from the northern provinces of China, especially from Peking, Santchuen, and some other cities. They dwell here like travellers, without their families, for in the whole Chinese market-towns, no woman is to be seen. Those however, who feel their Oriental blood, are very gallant customers to the women in Kjachta, who to the prejudice of their national honour, are frail to an excess. The Chinese are also charged with unnatural crimes, at least they are remarked for keeping young, fine-made shop-men, with whom they are very familiar. Some, also, spend large sums in the Mongolian quarters, with females of that nation, of whom I shall say more hereafter.

All the Chinese merchants here residing, trade in partnership, two or more together, relieving each other by turns, one conducting the business a whole year in Kjachta, whilst the other goes home for fresh merchandize; on the arrival of the latter, the former sets off with the goods bartered for, and returns the next year with a new cargo. The Surtgutschei presides, with the power of a magistrate, over the

the merchants here residing; and not only keeps up a rigid police, but directs the trade, and gives orders respecting it, that no advantage in commerce may be lost. He is generally a man of rank and abilities, but it sometimes happens that Mandarins who have committed, in other places, certain misdemeanors, are sent here to undertake this office, for their punishment and reformation. His characteristic mark of distinction is a crystal button on his cap, and a peacock's feather behind. The Chinese give him the title of *Amban*, (commander in chief). No one dares approach him, but bending his left knee, in which posture he remains the whole time he is speaking, and until he receives the *Amban's* answer. This magistrate has a salary, but far inferior to the presents made him by the merchants. In China, it is the privilege only of high rank, to ride in a four-wheeled carriage. The *Surgutschei* rides in a covered cart, with two wheels only.

The persons of the Chinese are sufficiently known; they are well formed, and many young persons have sweet, fair faces, to which their small black eyes and jetty hair give an agreeable turn: yet we frequently meet with broad *Manshourian*-like masks, high cheekbones, broad noses between the eyes, and extraordinary large ears, which seems to be national to this people. Elderly men suffer their black beards to grow, but all shave their heads in the *Manshourian* way,

way, leaving only one thick, lock on the crown, which is universally black, and which they braid into a tress. Hence they are good customers to the barbers, whose houses are distinguished by little flags hung out at the door.

Their dress is very uniform, and suited to the season; they have particular clothes for the summer and winter, and others for the intervals of these seasons. This difference is most remarkable in their caps. In spring and autumn, they wear little, round covers, which barely hide the crown of the head, whose standing border is covered with the skin of a sea-dog, or sea-bear, or with velvet; having at the top, a little button, and a taffil of twisted, red silk, which overspreads the whole hat. In summer, they go about with wide straw-hats, resembling a bowl, which shade the face; these are neatly made, cost often from four, to six rubles, each, and have an elegant fringe of long, red shining hair, taken from wild, Tangutian cows, the *bos grunniens* of Linnæus, which the Chinese call *Sinija*, the Mongols, *Sarlikukyr*. In winter they wear flat caps edged with fox-skins, and fringed at the top: these do not cover the ears. All European nations take off their hat, in the presence of persons of rank; but it would be a sin against Chinese politeness and respect, to do the same. Their garments vary, in every season, in the thickness of the linen and stuff of which they are made. Merchants of all ranks,

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wear the same dress, which is chiefly shining, cotton stuffs (*Kitaika*) generally black, but sometimes dyed of a deep blue. This is their dress from spring to autumn, and consists of a garment which reaches to the ancles, with narrow sleeves. Behind, it is slit open to the waist, and ornamented before with buttons the whole length. Over this they wear something resembling a woman's jacket, without sleeves, passing the arm through a hole, and above all, a short waistcoat, whose sleeves reach to the elbow, made of silk, and lined with the fur of the paws of sable, fox, or sea-bear, with the hair outwards. Persons of distinction wear their waistcoats made of curled, black sheepskins, sables, or the sea-bears of Kamtschatka. The latter articles are of importance, are part of the Russian trade, and worn by the whole court of Peking. They wear also wide boots covered with black silk, the soles of which are heavy, half an inch thick, and made of coarse, cotton stuff (*Daba*) glued together, and are said to last several years. On their girdle, which fastens their under-garment, they carry, constantly, long, silk tobacco pouches and pipes, and a case containing knives and the little chop-sticks, which they use as forks. They are always so dressed, both at home and abroad. Their persons and houses are kept with great cleanliness, which seems the more surprising, as all the domestic business is performed by men. They are inured to cold, of course, their rooms are so little heated in winter, that an European would
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be chilled in them. Many, especially opulent merchants, who do not meddle with packing and unpacking of their goods, let the nails grow on their fingers to the length of half an inch. I saw some whose nails were rolled up and grown into the flesh. A European would not be able to imitate this odd custom without difficulty, and would often lose his nails, before they attained their proper shape and strength.

Their food is clean, very nutritive, and suited to the seasons. They are remarkably fond of garden-fruits, vegetables and sweet-meats, and eat a great deal of garlick. In summer they supply Kjachta with coleworts, girkins, radishes and French-beans, and cultivate for their own use spinach, celery, parsley, yellow-parsnips, and a kind of colewort, split like endive. As other productions of European gardens do not ripen here, they bring with them rice, several sorts of peas, also dried, and, in winter, frozen fruits. Among their peas I remarked an oblong, little, green species, called *Lodou*, which appears to be the *Phaseolus radiatus* of Linnæus, and which they suffer to attain their full growth, during winter, in water which they often change, and then eat them raw instead of fallad. The most common, fresh fruits which may be had of the Chinese, are water-melons, apples, (*Pinsa*) like green *Pommes de Rennette*, pears, a species of oblong quinces, (*Mugba*), citrons, sweet and four oranges, wild chesnuts (*Kidfa*), large walnuts, a little, red pentagonal

tagonal medlars, which grow wild in the northern parts of China, and of which, with sugar, they make a cheap jelly, called by the Russian merchants *postila*. They have also a fruit called *alema*, which seems to be nothing more than a Tkalchu apple, and brought from the southern provinces. They have also a very peculiar species of citron, (*fuischu*,) divided like a lily-root into 12 parts, without kernel, and uncommonly fragrant; but these are only distributed as gifts, by the Surgutschei. Of dried fruits the Chinese have long raisins, with a large kernel; small, black, sourish raisins; little fruits of a species of *elæagnus*, with a peculiar kernel, called by the Bucharians *dshigda*, by the Mongols *zagda*, and by the Chinese *sazusa*; a species of reddish, smoked prunes, (*schuptuga*,) with a kernel like a roller; little, black plums, dried apples, oranges squeezed and boiled in sugar, preserved ginger, black, sweetish fruits with many flat kernels, (*choder*,) some of which are brought from Persia, and are called *gorokum*; a shell-fruit, with a large, round kernel, encompassed with a sweet substance, exquisitely mellow: This substance is pressed together into flat cakes, wrapt up in bamboo leaves, and used as a cordial sweetmeat; it is brought from the southernmost provinces, and sold by the name of *gaklo*. They have also other fruits, with one or two nut-like kernels; whole flat nuts, in form of an apricot-stone, with a bitterish, purgative kernel, (*lanfu* or *boigo*); common almonds, pimenti and other cheap

spices. Among their other eatables the Chinese have crabs, brought from the sea-coast, and salted, which they eat with rice; sea-snails, dried on strings, (*holothuria tremula* Linnæi, in Chinese *chairsan*,) and a gristly, sea production, called *dshileng*. With the latter they also brought me some particular dried flowers, (*tschentcheng*,) which they boil in soups, and are brought from the southernmost parts. They have sometimes also spongy roots of a water-plant, consisting of members an inch long. The Chinese bring also, in winter, frozen pheasants to Kjachta, which they find on this side the Chinese wall, on the southern parts of the mountains which separate the rivers Amur and Choango; but are mostly met with about the latter river. They are said to be fond of dog's flesh, and that it is publicly sold in the markets at Peking; but the Chinese here will not admit it. They also carefully conceal their eating, as a dainty, the legs of frogs, and a species of large wingless grasshopper, common about the river Selenga, probably because they have been laughed at for it by the Russians.

The usual drink of the Chinese is tea, which they keep almost the whole day on the fire, and drink it whenever they are dry; they boil it a second time, make it very weak, and use little or no sugar. Their strong liquors are, the tarasur, which may be compared to English beer mixed with brandy, and a kind of brandy, called in Mongol *Chantschina*. Many of
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the Chinese are so much addicted to the free use of this and other Russian, strong liquors, that we commonly see the lower class going about the town with chains on their legs, the usual punishment for fighting and other excesses committed by people in liquor: it is probably owing to this policy that a drunken Chinese is seldom seen abroad.

They cannot exist without smoking tobacco. If at leisure, they will never let a quarter of an hour pass without taking a pipe; so that they are constantly smoking in the streets. As the bowls of their pipes are not much larger than a thimble, they have the pleasure of filling and lighting them often.

The Chinese of this place are affable and hospitable; and though they never like to treat a stranger with any thing but tobacco and tea, they are in this liberal to every visitor. To acquaintances they will present sweetmeats, and various sorts of fruits. When they visit the Russians, let them be ever so strange, they are impetuous, and without paying any regard to rank, very bold, and often unpolite: they will enter houses uninvited, with their pipes in their hands, sit down unasked, and continue sitting as long as they please, let the people of the house take it as they will. It seems the Russians have led them into this unmannerly conduct by their too great indulgence; for in presence of their own superiors they always keep a respect-

ful distance. They are fond of games; and when they have no business to employ them, are generally seen playing at draughts at home, in their own way, or with little Chinese cards in their hands.—To gratify this passion, they frequently buy many Russian copper and silver coins to game with, and purchase, from the Russians, eatables and other little necessaries the cheaper.

Persons of distinction play, in their hours of leisure, with a rosary in their hands; and some of the middle class carry such rosaries made of larch resin, continually along with them, which the sweat of their hands renders as hard and transparent as yellow amber, and will fetch a good price among the Mongols.

In their trade and conduct with the Russians, they are exceedingly crafty, secret and interested, and hereby have a great advantage over the persons they deal with, who are not a match for them. The Russians are strictly punctual and exact in trade, and are kept to this by the Surgutschei, who strives all he can to advance its success; but the Chinese too often render the best regulations fruitless, by their selfish, giddy and chattering mode of dealing, if not kept within bounds by the severe inspection of some commercial chief. This has made the Chinese well-acquainted with the value of Russian productions, and enables them to keep their own in a proper balance; for the
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Surgutschei punishes those who attempt to spoil another's bargain by underselling him; he also takes care that the markets are not overstocked; for as the general rendezvous of the caravans from all the towns and cities of the Chinese empire assemble in the Mongolian court-quarters on the river Tola, 375 miles from Kjachta, they are only suffered to come from that place in moderate numbers to this frontier town, in January, May, and autumn. For this leave they pay a duty of five *per cent.* for all Russian goods on return. This small duty is what gives the Chinese the principal advantage over Russian merchants.

The goods are mostly brought here on camels; yet the Chinese make use of a bad kind of cart with two awkward wheels, having two cross beams, and a third passing the centre, through which the axle-tree is fixed, and which turns with the wheels. When the merchant caravans travel in winter through the step, they carry with them felt tents, which they erect at night. In summer they have fine hut-frames made of cane, which they fold up together like a fan, and put into wooden cases, occupying no more room than seven inches in length, and four inches in height and breadth, and yet, when spread out and covered with a sail-cloth or mat, two persons may sit and sleep therein, and be entirely sheltered from the sun and rain. They are usually 46 days on their journey to the next town, situate on the great wall, called *Zifongku* or *Schanf-chiacho*,

chiacho, by the Mongols *Kalgan* or *Kalcha*, (new gate,) and from thence to Peking four or five days, and from Kalgan to Santschuen about a fortnight.

The Nikanian tradefmen on the frontiers all understand the Mongolian language, in which the Russian merchants talk to them, either themselves, or by appointed, sworn interpreters. Many speak broken Rus; but their pronunciation is so soft and defective, that a Russian can scarcely understand them. They cannot pronounce the letter *r* at all; but sound it as an *l*. They also divide by vowels such syllables, which, if joined together, have more than one mute letter, wherein the Rus language is very rich. These two defects are never observed in Tartars, Mongols, Kalmucks, and other Asiatics, who learn the Russian language.

The trade with the Chinese is chiefly carried on by barter or exchange of goods. The Chinese come to the Russian mart, where samples are laid out, and they chuse what they like. Contracts for goods are sometimes made in the market; but the Chinese generally go home with the Russian merchant to his house, and there make the agreement. At first it is settled what goods the Russian merchant can and will take; then the quantity and respective value of the goods to be mutually exchanged are agreed on; and after having drank tea, and both parties having finished their
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bargain, they go to the warehouse, where the Chinese dealer marks all the bales of goods and other articles he has agreed for, which is sometimes the contents of the whole shop; this done, the Russian merchant goes to the house of the Chinese dealer, and inspects his goods, enquires into the value, and particularly if they are all perfect, and having fixed on what he likes, separates them from the rest, and leaves a person in charge of them, and to take care they are not altered or diminished, till an opportunity suits to exchange the goods mutually, according to agreement. In this exchange the Russian merchant rates the value of most Chinese goods at a half, a third, and often at a quarter of the price at which he values his own, which he can the readier do, as Siberian furs may always be bartered at double the price they are frequently bought for, and are in goodness and value a very arbitrary merchandize. Without this advantage it would be impossible for the Russian merchants, who are at so great an expence for transporting them, to pay a custom-house duty of 20 to 25 *per cent.* for most of the goods they sell to and buy of the Chinese; hence it seems evident that a wholesale trade of current Russian money would be injurious to the state; and for this reason the court of Petersburg has prohibited it. The greatest disadvantage the Russian trade labours under is, that some merchants who arrive from the distant parts of the Russian empire, sell to the Chinese at a lower valuation, in order to be able to

make their bargains, and return the sooner ; yet there is a commercial establishment formed by a company of Rufs merchants in Kjachta who, by authority, fix the prices of merchandize among themselves, instruct the travelling merchants of this, as soon as they arrive, and endeavour to persuade them into what is right ; yet, in spite of all this, there being no severity of punishment inflicted on transgressors, they cannot always prevent it. Besides, there are many young, Rufs merchants who, by babbling, when half-drunk, will let the Chinese perfectly into all those circumstances which the rest would wish to have concealed.

Here follows a list of the prices and sorts of some kinds of goods exchanged by the Ruffians and Chinese, according to a late regulation of the chief commissioner of the frontiers. This list contains the highest and lowest prices from 1770 to 1772.

The chief article of Russian goods are furs. The chief, Canadian furs imported by sea, and brought to Kjachta, are as follow :

Canadian beavers from seven to 10 rubles each ;
each ruble 4s. 6d. English.

Otters, of the best sort, from six to 25 rubles.

Black foxes from one to 100 rubles each.

Common foxes three rubles and a half.

Most

Most of the rich furs which the Chinese buy, are productions of Siberia, in the newly-discovered, eastern islands, and a small part in the uninhabited districts of Russia. Those which come into trade at Kjachta are valued as follow :

Sea-otters from Kamtschatka, or what they call sea-beavers, are much sought after by the Chinese, and are valued at between 90 and 140 rubles each.

Sea-beavers tails from two to seven rubles each.

Common beavers from the Syfran, Ob, and Tschulym, without bellies, four rubles to six and a half each.

Bags of beavers bellies sewed together, 25 to 44 rubles.

River-otters 30 copecs apiece, each copec a half-penny English.

Bear-skins from two to four roubles each.

Wolf-skins, the worst under two, and the best to eight rubles.

Young wolves cut out from the belly of the dam, 30 copecs each.

Wolf-paws, according to the goodness, 30 to 70 copecs each.

Lynx-skins, four to six rubles each ; lynx paws one and two eighteenths to three and a half rubles a couple.

Hyena-skins eight to four rubles each ; hyena paws, 25 to 50 copecs a couple.

Foxes

Foxes quite black, or with hoary hair in a dark bottom, from four to 180 rubles.

Hoary foxes, 10 rubles.

Fine red foxes from 80 copecs to nine rubles.

White foxes, two rubles.

Fox-bellies, 75 copecs to one ruble the couple.

Fox-tails of the common species, 4 copecs.

Bags of red fox-backs, sewed, 26 to 60 rubles.

Fox-bellies in bags, 20 to 28 rubles.

Whole fables of the meaner species, two and a half to 10 rubles each.

Bags of such mean fable-backs, sewed together, 120 rubles.

Sable-tails 25 to 50 copecs each; fable-bellies 58 copecs the couple; bags of fable-paws sewed together, 20 to 50 rubles.

Marten-furs, 90 copecs to three rubles each; marten-paws nine copecs to three rubles; and bags sewed together of marten-necks, seven rubles; marten-tails 20 copecs each.

Furs of the islanders, consisting of martens and chesnut-brown fables, brought through Anadyrskja, 25 to 40 rubles each.

Ermines of various value and shape, which was formerly a very dear article, and sold by weight, (till the Chinese found out that the sellers imposed on them by sewing lead in the paws) are sold now from 20 to 60 copecs each.

Bags of ermine sewed, 15 to 25 rubles.

White

White weasels two to 10 copecs.

Fire-yellow weasels, 25 to 27 copecs.

Common ferret furs, 11 to 15 copecs.

The tails of both former animals, two to three copecs each.

Bags of ferrets sewed, six to 15 rubles.

Bags of grey fur backs, three to 20 roubles.

Bags of squirrel-heads sewed, caught on the river Lena, three rubles.

Flying squirrels, two to six copecs each.

Striped squirrels, two to three copecs each.

White hare furs, 11 to 12 copecs each.

Bags of hare-bellies or backs, from one ruble to 70 copecs, and four rubles to 35 copecs.

Bags of hoary hare furs, about seven rubles.

Bags of sewed hare-paws, two rubles and a half.

Bags of dyed white hare-ears with black points, three rubles.

Rabbit furs, from three to 10 rubles.

Wild stone cat, one ruble to 74 copecs.

Mus rats from the district of the Wolga, 28 to 34 copecs each.

Bags of brown and black water-rats, sewed, collected in the Lena, four to 10 rubles each.

Common or blacked marmot furs, 15 to 25 copecs each.

Bags of the silver white bellies of plovers, sewed, on the Baraba, 12 to 13 rubles.

Sea-

Sea-dogs, partly from Archangel, partly from Baikal, one ruble, 40 copecs, to two rubles.

Young sea-bears, black and grey, from one and a half to six rubles.

Large portmanteaus of grey sea-bear skin, four to 20 rubles.

Mattresses of sea-bear skins, 89 rubles.

Jakutina young rein-deer skins, four to five rubles and a half.

Saigak horns, of which the Chinese make some very transparent lanthorn panes, 60 to 80 copecs the couple ; single, 27 to 35 copecs.

To these wild animals the following domestic ones may be added, as productive of gain in the Russian trade with the Chinese.

Common cats furs of various colours, 14 copecs each.

Fine black lamb skins, from 30 to 110 copecs each.

Vari-coloured and white common lambs skins, from 20 to 58 copecs.

Large black and white common sheep skins, 25 to 80 copecs.

Goat-skins, which are common Mongolian furs, 12 to 40 copecs.

Dog-skins, 50 copecs to one ruble.

Black and red Russia hides, or Jufts, two and a half to four rubles.

Cor-

Cordovan and Turkey Cordovans, 90 copecs to two rubles.

Living sheep, one to two rubles.

Bullocks, 17 to 28 rubles.

Beef, 130 copecs per pud, or 36 pounds.

Mutton, one ruble per pud.

Geldings, 20 rubles and more.

Horse flesh of old slaughtered, or otherwise perished animals, 16 to 18 copecs per pud.

Beef and mutton tallow, two rubles per pud.

Sea-dogs fat, two and a half to two rubles per pud.

Fish fat, one ruble, 20 copecs per pud, to three rubles.

Common glue, 15 to 30 copecs the pound.

Fish glue, 18 rubles per pud, 40 to 80 copecs the pound.

The following, inland manufactures are brought by the Russians to Kjachta, and rated at the under-mentioned prices.

Common soldiers cloth, one ruble per ell; or 2 feet.

Common Russian ditto, 40 copecs per ell.

Dyed and undyed peasant's cloth from the Lena, and other places, 12 to 35 copecs per ell.

Felts made of sheeps wool, two to three rubles each.

Demi Camblet from Moscow, 30 copecs per ell.

Russian callimanco, 25 to 50 copecs per ell.

Russian draget, 50 copecs per ell.

Common

Common Russian *Drell*, 39 to 60 copecs per ell.

Coarse linen, 15 copecs ditto.

Printed linen, 35 copecs ditto.

Common linen, six to seven and a half copecs per ell.

Napkin stuff, 15 copecs ditto.

Striped coarse stuff (*Tik*) 30 to 50 copecs per ell.

Common linen handkerchiefs, 2 copecs each.

Paper to hang rooms, 16 rubles per quire.

Brass tea-kettles, one to two rubles.

Green glass bottles and glass vessels from the glass-houses of Irkuzkaja, 50 copecs.

Mock gold, 25 to 40 copecs the piece.

Looking-glasses of all shapes and kinds, in various frames, from the smallest chamber-glasses to the meanest pocket-glasses, from 10 copecs to four rubles, and sometimes 40 rubles.

Axes, 50 to 115 copecs.

Scythes and sickles, 33 to 8 copecs.

Common pocket-knives, two rubles and 40 copecs.

Common knives in cases, 25 copecs, to three rubles a dozen.

Common scissars, five to 20 copecs.

Locks by Pawloff, 10 to 42 copecs.

Among other articles which the Chinese are eager to purchase, I must mention the isinglass, which sells at present at 27 rubles the pud; but formerly, when the trade between Russia and China was in an infant state,

state, a pud of large isinglass was sold at Peking for from eight to 10 rubles only.

Of foreign manufactures the Russians import the following articles:

English, Dutch, French, and German oiled linens, from two to seven rubles an ell.

Camblets, 70 copecs to one ruble an ell.

Callimanco, 30 rubles each piece.

Draget, a half ruble to two rubles an ell.

White flannel, 60 to 100 copecs an ell.

Gold stuff, 20 to 30 rubles an ell.

Gold gauze with silk flowers, 15 rubles an ell.

Tin, 15 to 31 copecs per leaf, and all sorts of foreign looking-glasses of the lesser sorts.

Next follow the Chinese goods bartered for the above articles, and transported throughout Russia. The silk stuffs, which the Chinese bring to Kjachta, are now much inferior in goodness and value to those they used to bring formerly: their satins and damasks are also so thin and flimsy, that they will scarcely do for Russian cities. Rich and thick satins, and other good stuffs, are now seldom seen. Their thin taffeties, if made of good silk, and not oiled, and their Kitaika, or Nankeen, may be considered as the best of all the woven goods in China. Even tea is not so fine, and yet dearer than it was formerly; the Russian merchants

chants however always chuse the best sorts. The article next in importance is their porcelain, or China-ware, in which they have evidently imitated the European porcelain in its strength, fine forms and painting, probably from patterns they must have received from Canton. I have taken notice of figures painted on their porcelain and on paper, habited in European dresses, and ornamented with representations of Roman idols, and regular copies of known copper-plates. At the house of a Chinese I saw painted in colours *Pygmalion, et l'oiseau en cage*, two original French prints. Merchants, who sometimes bring German and very indifferent copper-plates to Kjachta, find numberless purchasers among the Chinese.

I. The chief articles brought from China are as follow :

Fine silver in pieces, cast and stamped, which the Chinese use instead of large pieces of money. Their form, which resembles the hoof of a horse, was in days of yore introduced into China, because a horse, by scraping up with his foot some pieces of massive silver, discovered the first mine of this metal. A pound weight of this silver, in barter, is valued at 16 rubles.

Raw silk, a capital article ; not brought in such quantities as the Russians wish for : a pud of the best sort is valued at 150 rubles, or three rubles and

and a half the pound; the inferior sort is sold at 75 rubles per pud.

Raw and very pure cotton, used by the merchants to pack their porcelain in, from four rubles 80 copecs the pud to 12 rubles.

Spun silk of various colours, from two to four rubles the *gin*.

A stronger sort of spun silk (*polutarnaja*) from four and a half to six rubles ditto.

Mongolian spun silk, an inferior sort, in all sorts of high colours, from two to three rubles the *gin*.

The Chinese wove silks and cottons are at present valued at the following high prices:

Plain velvet, of very loose texture, in pieces of nine ells, from nine to 12 rubles apiece.

Flowered velvet of a better texture, nine ells in a piece, from 18 to 25 rubles each piece.

Stuffs from 25 to 30 rubles a piece.

Satins, or *Kanfa*, flowered and plain, the largest and broadest pieces, containing 20 ells, between 25 and 40 rubles; middle sort of bad silk, in pieces of 16 ells, from 15 to 25 rubles; the smallest from 10 to 20 rubles; what they call *Smaflanki* from 10 to 18 rubles.

Damasks, or *Gooli*, brought by the Bucharians, large pieces from 12 to 20 rubles; smaller ones from 11 to 13 rubles. Damasks brought by the Chinese; large pieces, of 15 or 16 ells, from 12 to 16 rubles; smaller ones from 10 to 11 rubles.

Gros de tours, with or without flowers, from 10 to 30 rubles each piece; what they call *Rezet*, of different lengths, about one ruble the ell, from 10 to 20 rubles.

Baiberek, 10 rubles the piece.

Uss, a kind of ordinary, silk stuff, that shines like satin, from five to 10 rubles the piece.

Thin taffety, or *fanfa*, the best sort in large pieces, of 20 to 22 ells, from 10 to 12 rubles; middling sort, of 16 ells, from six to eight rubles; smaller ones from three to four rubles; and the worst sort from two to four rubles.

Silk gauze from two to 10 rubles the piece, and 25 to 30 copecs per ell.

Silk *lanfa*, from one and a half to two and a half rubles; demi-silk, from one to two and a half rubles the piece.

Bucharian *Kudna*, a cotton stuff, with silk and satin stripes, three rubles.

Oiled, silk gauze for dress in rainy weather, two and a half to five rubles the piece.

Oiled taffety, for the same purpose, small pieces from three to six rubles; ready made, rain cloaths, three to five rubles.

Second-hand Chinese cloaths, similar to a man's morning gown (*asami*) of satin, damask, *lanfa*, and gauze; the first from three to 15 rubles, and the latter from 45 copecs to one ruble.

Silk curtains, from 10 to 20 rubles.

Silk counterpanes from five to 10 rubles; of *lanfa* and cotton, half a ruble to two rubles.

Silk fringes for caps, 44 copecs.

Cotton flannel, whose rough side is curled like the fleece of flunk lamb-skins, from 10 to 25 copecs per ell, and 50 copecs to three rubles per piece.

Bucharian cotton, at two to four rubles the piece.

Daba, or white, narrow cotton, coarse woven, large pieces from 50 to 20 ells, at one and a half ruble; middling ones, from 14 to 15 ells, at one ruble; smaller ones, from 10 to 18 ells, at half a ruble to one ruble.

Dalemba, a small, cotton stuff, at one and a half ruble the piece.

II. The second chief division of Chinese goods are ornaments and vessels of porcelain, enamels, &c. with numberless trifles. I will mention some of the principal; for it would be as tedious to give a list of the whole, as it would of the French fashions; for the Chinese are full as trifling as the French nation, or the people of Nuremberg in Germany; and they find plenty of insipid purchasers.

Common porcelain dishes, with cups and covers, at four rubles the dozen; coarser ones, with or without covers, at three to 50 copecs the pair.

Plates and dishes from five copecs to one ruble; sweetmeat dishes at two and a half rubles; sweetmeat plates, two to 15 copecs.

The whole materials of a tea-table, with cups and saucers, from five to 12 rubles; tea-pots from 10 copecs to one ruble; punch-bowls, with a dish to set them on, one ruble; milk-cans 50 copecs.

Wash-hand basons from six to 50 copecs; with undersets, 25 copecs to one and a half ruble.

Earthen basons, teapots, washing basons, pots, &c. from four to 30 copecs; stone plates, bowls, tea-pots, &c. &c. 10 to 25 copecs; large, stone waiters three rubles.

Enamelled waiters or boards, with six bowls, from 25 copecs to one and a quarter ruble; tea-pots from 15 copecs to one ruble; sugar-boxes and tea-caddies, from 25 copecs to one and a half ruble; fruit-plates two and a half to four rubles; small sweetmeat-plates from 44 copecs to three rubles; not to mention salt-boxes, vinegar vessels, goblets, &c. whole sweetmeat sets at three rubles.

Lacquered tea-boards, &c. from 25 copecs to one and a half ruble.

Wooden cups varnished, made in this place, from five to 40 copecs.

Little, brass bowls of various sizes, from five to 15 copecs.

Large, copper bowls, at 50 copecs; ladles at 20 to 50 copecs, &c.

Iron ladles and spoons, from four to 30 copecs; basons of cast iron, of different sizes, 50 copecs to

2½ ru-

$2\frac{1}{2}$ rubles; iron strakes for wheels, and cast-iron axletrees; two of the latter, with boxes, 50 copecs, and 25 copecs per cwt. for the strakes.

The Chinese would not be able to get rid of these wretched goods, and other kinds of iron work, if iron, after the abolition of the manufactory of Irkuzkaja, was not become so dear, that it was sold in Selenginskaja at three copecs per pound, and dearer still at Irkuzkaja. The Chinese have begun, at the distance of 37 miles from Kjachta, to smelt raw iron in hand-blasts. They do not forge any; on this account buy their steel very dear from the Russians, but sell their cast-iron more advantageously.

Lacquered shrines, with the best varnish, from 90 to 150 rubles, and more; common ones, lacquered on wood, 30 rubles, and upwards.

Little, ivory boxes, five rubles.

Boxes inlaid with mother-of-pearl, or snail-shell, 25 to 66 copecs.

What they call *Chinese bibles*, exceedingly well painted upon soft stones, ivory, or with figures on silk, five to 30 rubles.

All sorts of porcelain figures, of various prices, according to the workmanship.

Lacquered watch and dial cases, 75 to 120 copecs.

Tea papers, 100 sheets from 25 copecs to one ruble.

Colours, at half a ruble to 11 rubles per hundred weight; sold by the pound for 40 to 100 copecs.

White lead, in boxes, from one to five copecs.

Red lead, a little box at one ruble.

Red colour, box at 25 copecs.

Varnish, a small bladder, at two to five copecs.

Paper to paint on, from half a ruble to two rubles the cwt.

Frankincense candles, the bundle, from one to 10 copecs; the box, at $3\frac{1}{2}$ rubles.

Densui, an earthy medicine, in little cylinders, of a red, yellow, or black colour, similar to the stone of Goa, at $1\frac{1}{2}$ ruble to eight copecs the piece.

Cane walking-sticks, 10 to 50 copecs; wooden ones lacquered, 30 copecs.

Gansa, or little Chinese tobacco-pipes, of iron, at two to six copecs each; more elegant ones of the same kind, of tutaneg, or brass, four to 50 copecs.

Tobacco-purses, 15 copecs; fire-steels, and files, at 10 to 15 copecs.

Burning-glasses, at 10 copecs; spectacles, in cases, at 40 copecs; bad Chinese compass-watches, in a hollow, brass globe, with a little looking-glass, eight copecs.

Glass lamps, with chains, two copecs.

Needles in parcels, one thousand, from 20 copecs to one ruble.

Glass beads, 25 copecs to one ruble the thousand.

Red

Red beads, made of glue soaked in oil, and always elastic, from 25 copecs to two and a half rubles the thousand.

Polished stones, 10 copecs each.

Round, blown-glass pearls, one ruble the thousand.

Flat, false pearls, one ruble the thousand.

Serpent-heads (*cypræa nodosa*), 15 to 50 copecs.

Flowers made of marrow, of very lively colours, the bouquet from half a copec to two copecs.

Tyger-skins, seven rubles; leopard-skins, two rubles.

III. The third division of Chinese merchandize comprehends all sorts of tea, eatables, and a variety of dainties.

Good green tea, or *shulan*, one ruble per pound; large boxes, 59 to 80 rubles: the best bohea, or *ladsumei*, two rubles per pound: the tea *tair-za*, 40 to 50 copecs per pound: *lonchowoi* tea, 16 rubles per pud: bohea, called *baichowoi*, five to eight copecs per pound; and a variety of other teas at proportionate prices.

They have a kind of tea called *kirpitschnoi tschai*, or brick tea, because this tea is pressed into tables, or cakes, eight or nine inches long, four or five broad, and one inch thick. It is prepared in the most northern provinces of China for the Mongols, who, like the

Burats and Ruffians beyond the Baikal, cannot do without it. Being an astringent, and mixed with bloody water to form it into cakes, it is very cloying, if taken with milk and butter; or, as the Ruffians do fasting, with oil and flour. On these cakes the Chinese print, or impress the name of the place where it is prepared, and an encomium on it. The translation of one that fell into my hands is as follows:—"From
 " the manufactory Jun-zen Zedfi, in the government
 " of Randshin, in the second month of spring, col-
 " lected when the dew falls; fresh, delicate, and salu-
 " brious tea, surpassing the best species of tea suulu,
 " pejean, contan, fynsu, jiupan, ljuidfan." An inhabitant of Selenginskaja endeavoured in vain to counterfeit this tea with the leaves of the dwarf elm, the *Saxifragæ crassifolia*, et *pyrola rotundifolia*; for his tea was directly known not to be genuine, because he had not given his cakes a proper solidity.

Chinese, yellow tobacco, or *scharr*, at 15 copecs per pound.

Sugar-candy, from 10 to 15 copecs per pound.

Millet, from 60 copecs to two rubles per pud.

Wheat-flour, from 50 copecs to two rubles 40 copecs the pud.

Preserved ginger, from two rubles eight copecs to eight rubles the pud.

Oranges preserved in sugar, $\frac{3}{4}$ to three copecs each, or four to six rubles the pound.

Star

Star anis, or *badjan*, six and a half to 12 rubles the pud.

Water-melons, 15 copecs each; apples, or *alema*, 10 copecs the pound; pears, one and a half copec each; apples, at 20 copecs to three rubles the cwt.; dried ones, five to 10 copecs the pound; chesnuts, 5 to 15 copecs the pound; walnuts, 10 to 30 copecs per hundred; confectionary and fruit jellies, in sugar and honey, from five to 30 copecs per pound, &c. &c. &c.

Hence we may see, that furs, hides, some coarſe manufactured goods, lacquered wares, glaſs, and great cattle, are tranſported into China; and that raw and manufactured ſilk and cotton, tea, tobacco, porcelain, ſmall-houſe furniture, and toys, are the objects of commerce with that nation. Eatables and flour were much dearer formerly than at preſent, and much more ſought after by the Chineſe,

Some of the poorer Mongols have begun to grow wheat about the river Orchon. They buy ſtill a great many horſes, and large cattle; for the Mongols are but yet poor in cattle, and their horſes are far inferior to the Ruſſian horſes. They buy up terriers, maſtiffs, and all kinds of large dogs, with avidity, and pay very dear for them. The watch-trade will no longer do with them, as they ſeem to have been plentifully ſupplied with this article through the European ſea-trade
at

at Canton; they even sell those watches that are out of order at a very moderate price, to the Russians at Kjachta.

The greatest advantage which Russia reaps from the Chinese trade, is its being able to make a good use of those natural productions of the remotest parts of Siberia, which would not be worth bringing to Russia, especially those sea-beaver skins, which will not sell in Europe, and are now the very life of Kamschatka commerce; by selling them at high prices to the Chinese, and getting from them those necessaries which the Russians would be otherwise obliged to purchase at an expensive rate, and to the disadvantage of their balance in trade. The revenue of Russia is very much increased by the Kjachta trade, by the duties on goods sold into China, and brought from thence. In the year 1770, the custom duties at Kjachta amounted to no less than 550,000 rubles, 128,750l. sterling; and in both ensuing years, not much less. The principal goods are settled by a tariff; those not so settled, are some, few furs, cattle, and victuals, which pay 23 per cent.; Russian manufactured goods, 18 per cent.; all sorts of fables, 19 per cent.; looking-glasses, 16 rubles per cwt.: and besides this, all goods pay one ruble per cwt. to support the customhouse and its officers, and some articles 7 per cwt. for the said purpose. The following goods are free of customs in going out of the kingdom, writing-paper, Russian lacquers, colours, fruit,

fruit, brandy, and all its preparations ; and the following are admitted into the kingdom duty free, raw and coloured cotton, glass beads, false pearls, white lead, fans, needles, preserved ginger, and other confectionary, rice, dogs, musical and other instruments, china, earthen wares, enamelled things, and a variety of furniture and ornaments,

Formerly there was a private trade carried on by the crown in caravans, which carried into China all fine furs, sables, black and grey foxes, blue and black ice-foxes, otters, beavers; and, among other articles, brought back tobacco; but these caravans that formerly went to Peking, are discontinued, and the Russian merchants may deal in all the above articles, carrying them out, without interruption, from any private trade, except ammunition, gold and silver, stallions, mares, rein-deer, elk-hides, tanned leather, horse-skins, beaver-hair, pot-ash, resin, and linen yarn; and may bring in every thing, except salt, brandies, poisons, copper-coins, and rhubarb, which are prohibited. Of the last article, whose purchase the crown has reserved as its prerogative, nothing has been brought in from China these two last years; but a commission has been lately signed for its introduction in future. The contractor is a Bucharian, called Abdusalam, and his son Abdaula. Abdusalam's father was the first importer of it at Kjatchta, and monopolized the whole. This Bucharian family are from the
TOWN

town Selin, situated south of Kokonoor (Blue-sea), towards Thibet, and is with all the towns of little Bucharia, subject to China. The district consists of high, barren mountains, on which the rhubarb grows, northwards from Selin, as far as Kokonoor, out of the clefts of the rocks. The old, good roots are known by their thick stalks; are mostly dry in April and May. Having dug them out, they scrape off the earth, and hang them about on trees in the neighbourhood, till the gathering season is over, when the Tangutians (who are the chief rhubarb-gatherers) take them down, and carry them home. The leaves are said to be round, and to have no very deep incisions; of course, by this description, the *rheum palmatum*, is not the genuine rhubarb, but the *rheum compactum*; for I enquired of the Bucharians respecting the former, and they were unacquainted with the leaves. Perhaps the *rheum undulatum*, which grows with rotten roots on some of the cold and moist mountains of Siberia, may grow also on the southern, free and drier mountains of Thibet, and make the noblest rhubarb-roots; and perhaps this, with care, might be properly cultivated in some parts of Dauria, or on the Jenisei, by frequent transplanting.

Exportation of the best rhubarb is prohibited in China (the Mongols call it *schara modo*, yellow wood, the Chinese *doncko*), of course the trade is a kind of smuggling one, effected by bribing the superior officers,

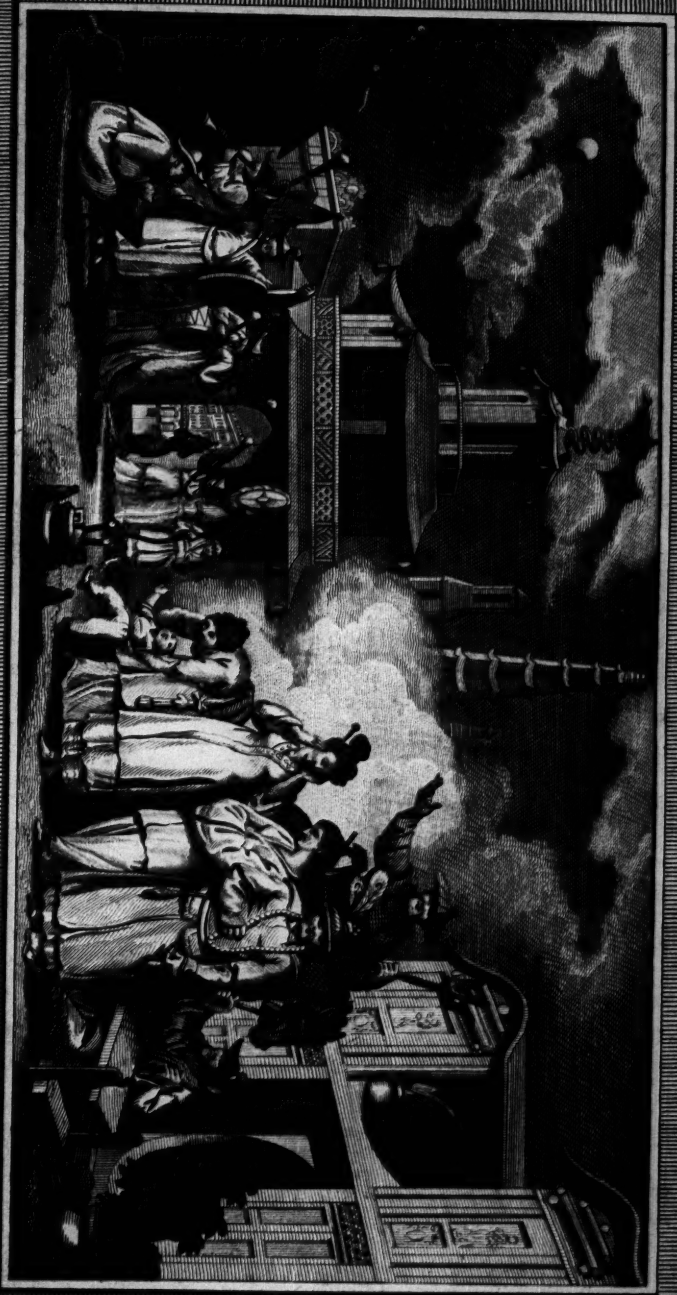
cers, and mixing the good roots with the bad. It is brought on camels, in woollen bags, containing rather more than five puds. Its brokage, reception, and payment, is under the regulation of a pensioned apothecary, in commission at Kjachta. All the rhubarb is there brought, and bored through by sworn workmen, in presence of the Bucharian merchants, scraped, and the refuse thrown aside: the spongy, hollow roots are of no value, these are not taken; but the good, sound roots are received, weighed, and paid for, as by contract. The refuse is burnt; though it might serve to make extracts and preparations of rhubarb, for the hospitals.

The Bucharians, at no small expence of the Empress, have already twice preserved rhubarb-seed, but it is unknown to me what species of Rheum was produced from the first seeds. The last time when a Greek officer of the rhubarb-commission at Kjachta, one Simon Manuelofsyn Skerletof attained seeds from one of his friends a Bucharian, they produced the known *Rheum palmatum*; but some persons, who have seen the rhubarb in its native soil, describe its leaves quite different, as I have mentioned above. Perhaps this medical plant comes from more than one species of this genus, which may be readily found out by experiments. In the last parcel sent, were some pieces of milk-white rhubarb, whose efficacy was equal to the best, but its taste sweetish. A selection is designed
to

to be made of this, and its true nature and properties enquired into.

On the 6th of April, 1772, I had an opportunity to be an eye-witness of the conduct of the Chinese, during a lunar eclipse, when they idly suppose the moon is attacked by a dragon. At night the guards of the police at Kjachta made a rattling in the streets every quarter of an hour, and every one might, if he pleased, have done the same. This alarm began at dusk, soon after the shutting of the town-gates, and continued incessantly, all the time the eclipse lasted. Besides this noise made with boards and kettles, the bell and tymbals at the pagoda were sounded, and the barking of dogs, stirred up by this noise, increased the tumult. The next day, scarce a Chinese was to be seen in the streets, though at other times in the day, they walk the streets in great numbers; for the 7th of April, was set down in their almanack as an unlucky day; in which no kind of business was to be done, except bathing. It is indeed remarkable that so keen a nation should attend so much to almanack prophecies, which, besides a deal of superstition, point out the business to be done every day. The conceit of delivering the moon from the attack of the bad, aerial spirit *Arach Ulla*, by noise, clamour and firing of guns, might be pardonable in the superstitious and uncivilized Mongols, but it is not agreeable to the usual prudence and discretion
of

CHINESE DELIVERING THE MOON.



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Engraving

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of the Chinese. Less pardonable is their foolish conduct in case of fire, of which there have been late examples in Kjackta: a house accidentally took fire, and the flames were so rapid as to consume several habitations. No Chinese would attempt to quench them. They stood in crowds about the fire, and only sprinkled it occasionally with a few drops of water, to appease the god of the fire, whom they believe selected these houses as a sacrifice. Had not the Russians, on this occasion, exerted themselves to the utmost, the whole place probably would have been burnt to ashes.

But notwithstanding this, I do not see that the Chinese pay any great reverence to their idols, except that on the days of supplication, which are appointed on the days of the new and full moon of every month, every Chinese goes once into the temple, and without taking off his cap, lays his hands together before his face, bowing five times to every pagod, and touching with his forehead the pedestal on which the pagod or Burchan stands, and then goes away. On high festivals, such as their new-year's-day, which, like the Mongols, they call the *white* day, and which is that which falls on the new moon in February, and continues the whole month, they hoist flags before their temples, serve up on the pagod-tables, a great deal of provision, which the priests consume at night, in the side-rooms of the fore-court, and in honour of the idols, exhibit daily, on the theatre I have mentioned

a comedy, satyrising generally unjust judges and magistrates. They have also, at this time, many other entertainments, but nevertheless do not neglect their business; indeed, this month is allowed by the Russian merchants to be the best of the whole year for trade, because the Chinese are then very eager to buy and sell, on account of the happy prophecies with which their almanacks are filled during this month.

On the 8th of April a Mongolian Taishcha, or prince, arrived at Kjachta, as an ambassador (*boschka*), or commissioner. His arrival was made known the night before by the Chinese Surgutschei; for Kjachta has also such a chief director of the Russian merchants, and called by the same name. The Surgutschei of Kjachta received him early in the morning at his house, where he equipped him, after breakfast, with a proper escort of soldiers and horses to conduct him safe to Selenginskaja. He came from the Mongolian head-quarters, *Urga*, on the river Tola, and was sent merely to surrender some poor Tangutians, who were under the protection of the Russian empire, and had transgressed the limits in winter, to a distance of 15 miles, for the sake of hunting, and had the misfortune to fall into a crowd of Mongolian hunters, who took them prisoners. Trifling as this offence may appear, the Chinese think so much of it, that they will on such occasions send a legate, or deputy, as far as Irkuzkaja, to make heavy complaints for such an usurpation,

pation of right, in encroaching on their boundaries. This legate, his secretary, and two other Mongols who accompanied him, wore, as badges of distinction, and being on public business, a peacock's feather hanging down from the hind part of their caps. The button of the legate's cap was white chrystal, those of his companions red glass.

On the 9th of April I left Kjachta at night, and returned to Tschikoi, where the Mongolian high-priest promised to meet me, and shew me the temples. I reached that place the next morning, and saw here a species of duck, not yet described by naturalists, with beautiful, vari-coloured, scythe feathers in their wings (*anas falcata*), which spend the winter in China, and the summer on the Daurian rivers, building their nests on the Lena, and Jenisei, and soaring in little flocks, with a whistling and shrilling noise.

On the 10th, in the afternoon, I was enabled to continue my return to Selenginskaja. On the road we were benighted; the unexperienced drivers having driven us out of our way. On my arrival at Selenginskaja, the river Selenga was almost free from ice; but it shut up the Tschikoi and Chilok, which last river was not open till the 20th of April. The sun, however, was so warm, as to cover with green and bloom the heights situated in the south. On the 13th of April we saw the first wind-flowers (*anemone pulsatilla*),

which sprung abundantly from the sand, and increased amazingly. On the 20th appeared the first flowers of *Potentilla subcaulis*, which is the most abundant plant in the sandy plains, whose leaves under the snow, continue green, and become the first food of the hungry flocks of the Burats. Their sheep devour in equal quantities the dry leaves of *Veronica incana*, and both species of the sharp wind-flower, which have a purgative property among the cattle, and often cures them of the winter itch; but their effect on the skin of the human body is the reverse, and seems to be so corrosive as to raise blisters.

Leaving a student in Selenginskaja to collect the vernal plants, I pursued my way to Udinskaja, accompanied by Mr. Sokolof, my draughtsman and huntsman; but did not go the usual road to this place along the Selenga, and the mountains that run along the side of that river, but chose a bye-way, in order to take a view of the iron ore discovered on the Kuitun, with which the smiths of this place supply the whole district of Selenginskaja, with iron and steel. I met in my way there with a number of fine, sky-blue magpies (*corvus cyanus*) with black heads, and very long tails, who come with the approach of spring from Mongolia and China, and build their nests on the Selenga, Onon, and Argun. Common as this bird is, we were not able to shoot one, out of the numerous crowds we saw, owing to their wonderful and frequent change

change of flight. Stretching away from the Selinga, we crossed a stony sand-mountain, and reached, on the 23d of April, in a deep valley, the river Chilok, which had been only two days free from ice, and was very much swollen. Whilst they prepared the ferry, we passed the night upon the shore, near a good fire; a dark night, and a little rain and wind, rendering our passage over the river impracticable till the next day, when my waggons were brought on barges, one after the other, to Chilokskaja, which consists of 30 habitations, of which two thirds are colonists of Polanders, settled here about six years ago. They cultivate buck-wheat; have their land given them, and grow plenty of water-melons; the situation to the south being warm, and the ground sandy. The river Chilok, which is here very broad, is so shallow in summer, as in many places to be fordable. There are a number of villages erected along this river, and colonized with Poles, who have mixed with some few of the natives.

We left the Chilok, crossed a mountain, and came to Tarbaganteiskaja, on the river Tarbagantei, passing several villages in our road. The population of this district amounts to 309 peasants and 466 new Polish colonists, all governed by Wybornei or elders chosen by the villages, and resident in Targabanteiskaja. From this place we travelled up the Kuitun, which springs from wild, barren mountains, truly

deserving this appellation; for there is not a green leaf to be seen in the whole district. The hollow places or depressions had almost every where flowers. Probably the saltiness of the soil may be the real cause of its cold nature, increased by an adjacent woody and high mountain. Though there are colonists here also, they cannot bring either flax, hemp, buckwheat, peas, or wheat to ripen; but the industrious Polanders try every means, and are not dispirited.

Dunging the land on these mountains is of no use; some Polanders have tried it on turnep-fields, but it was found to wither the corn. Some of the inhabitants keep a great many sheep of the Mongolian breed, with black heads; the ewes without horns. They also keep a great number of goats, whose furs are here an important article. The flocks of these people feed in summer with those of the Burats, who will not admit a horned he-goat among the females, that the offspring may not have horns to wound each other. Some of the Burats assured me, incredible as it is, that one he-goat was able to serve 60 females in one day, and render them fertile. The Kalmucks here told me the same. Among their lambs, many have fine, curled skins; and many of this breed are sold at a great price to the Chinese. The Polish colonists, according to a custom in their own country, in order to curl their fleece, lace the lambs, as soon as dropped, tight up in linen, and wet them the next day with
warm

warm water; in which condition they leave them three or four weeks under the ewe, till they think their tender fleece is sufficiently curled; letting the strings looser at different periods, as they find them grow; and when the lamb becomes too big to keep it thus swathed up, they kill it for the sake of the skin.

The woods about the Kuitun consist of fir, and on the highest parts, of larches, quite covering the adjacent mountain, which abounds with elks, and other game, and is full of iron ore. In the neighbourhood of this place, near the brook Katscherga, are the remains of a gold-mine, consisting of some, tolerably deep shafts; but as the lode soon discontinued, it has been deserted these 10 years. About five miles from this mine runs another mountain eastward along the Katscherga, where the ground is richly coloured with ochre, the vicinity of iron ores. The iron-mine has been worked, but, not finding the ore in any great quantities, has been left to private smiths, who have never been molested, nor the duty of 10 rubles for each hand-blast, demanded of them. These smiths here dig iron, supply the whole district of Selenginskaja with it, and get near a ruble per pud at the first hand. Quantities of ore lie above ground, and is gathered by the peasants in autumn, before the snow falls, when the ground is frozen, and carried to their houses.

houses. One man will often collect more than 50 puds in a day.

We crossed the Uda on the 26th of April in the same ferry-boat in which we passed the Selenga, and arrived early at Udinskoi, where, on account of some business, I stopped till next day. This place is situated on a point of land, formed by the union of the Uda with the Selenga, and has now a new-built stone church and two wooden ones. It is fortified with a timber wall, has four towers and one gate. Behind the town is a fine, new-built granary, which supplies the Daurian silver-huts with corn. Here live some substantial merchants, trading chiefly in cattle, Bura-tian lamb-skins, and Daurian grey furs, of which they send annually 3 or 400,000 pieces to Kjachta. Udinskoi, and other, little adjacent places, are well situated for the transport of salt and corn to the Daurian huts, and the lead brought here from thence.

Near Udinskoi begins the great, high road to Nertschinskaja, that has a verst-stone (every verst is three quarters of a mile) like our mile-stones; but has nowhere any hedges, and is entirely left to nature, because this road is chiefly used in winter for transporting goods, and other public business, when the brooks are frozen over. From Udinskoi we rode through a sandy fir-wood to the brook Berefotka, and then came to a dry, narrow slope, above 150 miles in length,
with

with little variation, except that of being sometimes intercepted with brooks, which flow into the Uda, has the Uda on the left, and a chain of mountains on the right. The stations from Udinskoi to Tschitinskaja are well supplied by the Chorinzian Burats. Each is obliged to keep 50 horses and some camels in readiness, for the use of those who travel on the business of the state, and for the transporting of goods. Here and there is a Cossack officer, to command and regulate these post-stations; and the intendant-general of the whole resides at Udinskoi. Here I saw, for the first time, the manner in which the Burats broke in young horses for draught. They have but few, tame horses, one of which they put into the shafts of each waggon; but should they have more waggons than they have horses used to harness, they will force wild horses to draw. The tame one being put into the shafts, a wild horse is placed on each side, and girt over the saddle with a double rope, in which there is a short club; then lashing another double rope on the waggon, they mount the horse, and place him so near the waggon, that they can wind the rope fixed to the waggon round the club on the saddle; thus will the young, wild, horse run along-side the tame one till he is tired, when they have others, following the waggon, ready to relieve him.

Near the second Buration post is a lake, on whose sandy borders lies a great deal of white, nitrous, bitter

salt, which the Burats fetch under the name of *chudshir*, and boil it in their tea, to make it thicker. Not every bitter salt will please them for this purpose, but that only whose taste is urinous and alkaline; and those who inhabit the mountains, and cannot get this salt, use sharp birch-ashes (*schulta*) as a substitute.

In a Buratian tent, of which there were some here, was a young, Chorinzian forceress (*Udugun*), whom I ordered to attend me in her magic dress; but I found her so unskilled in her art, that the tricks she played are not worth repeating: her dress shall be described below. Her magic drum was carried after her by her husband, whose office was to beat it. When she returned, the proprietor of the habitation took her crutches from her, and placed them over the door by raising the felt roof.

After travelling about 76 miles further, where the river Onon branches into three arms, and where I stopped on the 29th at Loffiowo Simowie, and sent for some forcerers; I visited the Damba, who resides in the neighbourhood, and is the head of the most numerous, Chorinzian tribe. No forcerer would appear, under a pretence that they were gone to some distant parts to practise their magic art. The Chorinzian Burats, who inhabit the country between the Chilok and Baikal, and beyond the mountains, on both sides the Ingoda to the Onon, consist of eleven tribes belonging to

to the regency of Nertschinskaja, and pay their Jassak, or tribute, in furs. Most of them are rank heathens, devoted to their magicians; yet the priests of Lama, whose zeal for conversion is uncommonly great, endeavour to spread among them their better superstition, which contains, however, some moral doctrine. They have already among them a Geskul, with 26 common Lamas, or priests, some nobles or Saiffangs, and a Taifcha or prince, followers of Lamaism.

In my way to a mine, at the distance of 11 miles, on the 30th of April, I stopped at the tents of the Buratian saiffang, Schantan, to ask him for a guide; but in hopes, at the same time, of meeting with a famous, Chorinzian forcerer. Disappointed of my latter object, I went directly to the metallic mine about seven miles further on, called the Mungut mine. The ores here consist of compact, massive lead-blinde, containing per pud about seven pounds of lead, and one dram of silver, and also an alloy of copper, of which more than 12,000 puds have been dug.

It is designed to erect, by degrees, in this whole road to Nertschinskaja, Russian station-villages, in order to release the Burats from the obligation they at present lie under of furnishing horses to travellers. About a mile north-west of the village Pogromna is a mineral spring, which, if largely drank of, causes a kind of deafness and vomiting, and is used by the
Burats

Burats against various, inward complaints with great success: but it has proved mortal to some Russians who have immoderately used it in severe distempers. I rode to the place, with an intent to examine into it, but the spring being frozen over, I was obliged to defer it till my return. About the spring were many dry bushes stuck in the ground, and left by the Burats, after having drank the water.

Six miles from the Pogromna, the Burats of the tribe of Scharazkaja have a post-station. Here I ordered a Chorinzian forcerefs, who lived in the neighbourhood, to be sent for, in order to see some of her magic arts. Her name was Labantsika; she came, accompanied by her husband and two other Burats, each of whom carried a magic drum. She told me she had not the full number of her drums, for that on feast-days she used nine. She herself carried two crutches, (*forbi*); each of which was ornamented at top with a horse's head, and had many little bells (*holbuga*) about her. With the same kind of bells in bunches was her leather-garment full. From her shoulder to the ground hung down about 30 black and white serpents (*nutchal*) made of vari-coloured pieces of fur, and furs of weasels and ferrets fastened one to another, like ribbands. Among the serpents, one at the end was divided into three parts, which she called *Mogoi*, and which above all things must not be omitted in their magic dress. Her cap was covered with an iron casque,

casque, with three branching horns on each side, like those of a deer. She was at no loss to play off some pieces of witchcraft, though it was broad day, and seemed skilled in her profession. She began with divinations, slow in the beginning, but violent afterwards; and began to leap and roar in her incantations, at the sound of the magic drums, in which she was accompanied by the Burats, who formed a circle round her. During the invocation the forcerefs seemed to be convulsed, half-swooning, and putting often her hand over her face, and thus concluded. During her first songs she feigned to run out of doors, but was prevented by two Burats, who stood at the door. After many other such-like fantastic ravings, she ran always singing towards three Burats, who were sitting with their drums on the left side of the hut. Once she took her crutches in both hands, and jumped, leaping as it were out of the smoke-hole, as if she wanted to draw the aerial spirits with her crutches into the hut. Afterwards she seemed gay, and begged to have questions put to her, which she answered singing, and swinging herself backwards and forwards. At last she asked for some brandy, and prophesied, from behind the liquor, that I should be happy, and travel much farther by sea, and with this she ended.

I have given this woman as an instance of the present art and dresses of Buratian forcerefses, in order that my readers may compare them with those of
other

other nations, whose forceries have been, or may be related. (See the Lapland magician, &c. and judge between them.)

On May the 5th, at day-break, a great deal of wet snow fell, which, with the stony and miry roads, made our way almost impassable, and extremely toilsome. We could scarce travel half a mile without stopping to give the Buration horses, which seemed to consist only of hair and bones, time to recover breath and strength. With the greatest pain, however, and loss of time, we passed the Uda, and crept over another mountain, covered with larches; and late in the afternoon found ourselves at the distance only of 12 miles from the place we left at break of day. We were fortunate, however, to meet here with a deserted winter-hut, with a stove, but without roof, door, or window, where we slept, and were sheltered from the snow; but our greatest pains were to find wood under the snow, which lay an ell deep. We collected all the superfluous wood of the hut, and thus made a fire; but it occasioned so insupportable a smoke, that we were obliged to stay without in the snow, till the wood was nearly burnt out. Two of my waggons were not so happy as to reach this wretched smoke-hole, but were obliged to pass the night in different places of the wood, though we sent back all the horses we had which were able to move.

Next

Next morning, after a chilling night, our desert-habitation looked like a field of battle. Near it stood our horses and waggons, of which we had 20, but 11 of them having died in the night, with the frost and hunger, lay stretched out on the snow, and had attracted all the crows and ravens of the forest, whose cawings rendered the place still more dreadful. A spent horse was set at liberty from a waggon, and it fell without looking out for a birch-bush, which is the winter-food of the Burtanian horses in this district. In our wretchedness, however, the birds of the forest, which, stimulated by hunger, gathered about our hut, gave me no little pleasure. We threw rubbish out of the hut, which still further decoyed them, so that we could shoot a great number of rare birds through the window-holes. Here I got seven, new species of unknown birds, some of which I never could meet with afterwards, as they inhabit the innermost and thickest part of the forest, and are very shy. These were, *Turdus ruficollis*, & *Alpinus*, *Motacilla Cyanura*, *Emberiza minuta*, *rustica*, *Chrysocilla* et *Spodocephala*. Towards night we found several, little birds in the snow, killed by hunger and the frost, and a little species of blue-tailed hedge-sparrow (*Motac. Cyanurus*) which, though extremely shy, flew into our hut for shelter, and hopped boldly about.

It was a joyful circumstance that the change of the moon on the 6th of May brought a serene day, which
gave

gave us hopes of deliverance from our wretched hermitage, where we were blocked up by the snow, and whose cold and dripping waters became more and more insupportable. I dispatched early in the morning an interpreter on horseback to get fresh horses from the next post-station, situated on the great road, at the distance of 11 miles. They were brought in the evening, but almost as poor and miserable as those which lay dead before us. We were able, however, this day to fetch the waggons left behind us; and, lying another night in this hovel, very scarce in provisions, the next morning we proceeded on, up to our knees in snow, dirt, and water, in order to lessen the load of the horses through the mountainous wood. Notwithstanding this help, we could not get further with the empty waggons than four miles and a half, and were obliged to put them out at the next birch-ground, to give them time to refresh themselves with birch-twigs. But with all this, we should not have been able to have got much further, had not the Burats sent us from Schascha-noor fresh horses and camels. The latter, in case of necessity, are put before the waggons, and a felt, rolled up, and tied between the poles or shafts, is to lie as a yoke betwixt the camel's neck and the hunch on his back. Thus did the camels draw us, though slowly, yet without stopping, through the vallies overflown with mud and snow-water. Some camels, however, are so obstinate as not to draw in different spots; nor can they be made
with

with the greatest blows, nor with the rope drawn through their noses. This day we crossed the Schibirtu, and two brooks which flow into the Konda. From the Schibirtu to the Konda, the wood is intercepted by a steep track of rocks, from which the snow-water rolled in such torrents, as to resemble so many rivers, and swelled the Konda so much, that we could not pass it without a bridge; and as we could not construct one that day, and our post-horses and camels longed for rest, we stopped at some Buratian tents that were there erected.

As soon as the bridge was finished next day over the deepest arm of the river, I ordered the waggons to cross, and we did the same on the camels; but scarcely had we reached the opposite bank, but the rising water dragged away the bridge. With much difficulty we travelled on; every thing seemed overflowed with a general flood; the smallest brooks were so deep, that we durst not pass them, had we not contrived a peculiar kind of *bridge of distress*, which was many times afterwards very useful to us. We sought, for example, for a spot where the brook was the narrowest, and its banks steep; then felled down two smooth fir-trunks, and some Burats, who were to ford the brook on horseback, dragged them across with ropes; and as these rested on the two opposite banks, our waggons could pass expeditiously on them; the axle-trees, which in this country go round with the wheels,

wheels, turning on these trunks, with the wheels and horses in the water. After having crossed several, frozen rivulets in this manner, we came at last to more even ground, and got on pretty well: but I must not omit mentioning a new species of ducks which I met with in this road (*Anas hispanica*) which inhabit the east of Siberia only, on the mountain-lakes and torrents; and as they seek for the wildest rock-waters, the Russians call them *Kamenuſchki*, that is, Cliff-ducks. They swim quite plunged in the water, so that nothing but their necks and breasts appear. They dislike flying, but dive when apprehensive of danger, and do this wonderfully.

On the 9th of May we reached the bottom of the partition-mountain, which divides Dauria from Siberia. This mountain rises gradually with a gentle ascent, till we come to that steep, rocky part, which, by the name of Jableni-Daba, separates the brooks of the Baikal and Lena from those of the Amur. This mountain, which is 15 miles broad, consists of granite rock, and extends itself from the Mongolian boundaries, beyond which it runs between the Tschikoi and Onon, with many windings, uninterrupted to the Eastern ocean. Its height appears moderate, for there are here and there side-mountains, which surpass it in loftiness; some whose summits during the whole summer are covered with snow, though it melts very soon on the partition-mountain; but the rapid
streams

streams of the waters which run from it to seas so remote, are an evident proof of its loftiness. It is peculiar that no regular rock-stratum is to be met with in the white mountain. The pieces of rock lay, without regularity, large and small together, mostly overgrown with moss, in which, between the cliffs, some few trees grew, and the wheels of our waggons received great damage. It would be in vain to mend this road, as the snow-waters, which have deprived these ancient mountains long ago of their earthy covering, would soon spoil the whole. The whole mountain is burnt up, and the trees, which are larches and birch-bushes, grow only on the east side, with a few pines and furs along the brooks. We passed this mountain fortunately; but, it being eight miles from the top to the next post-station, could not reach it before night; and as at the bottom the road was bad, and our horses fatigued, we took up our lodging in the wood, and reached the station the next morning, where I waited till the 10th of May for some of my people, who had stopped in Schakscha-noor, for the sake of hunting.

On the 11th I continued my journey for Titschin-koi. The country here became more open and agreeable; and only the highest mountains are covered with wood. The vallies are gravelly, and among the small stones is a great deal of quartz and milk-white Chalcedon-like pebbles. I stopped at a village

on the river Ingoda, five miles short of Titschinskoi, and ordered a raft to be constructed, in order to ride down the river, as the road along-side of it was quite overflowed. On the warmer mountains about the Ingoda, the larch-trees began to put out their leaves; the birches were dropping their juice, and the *Rhododendrum Dauricum* shewed its purple bloom.

On the 13th we got upon the rafts, passed Titschinskoi, and on the 14th landed 37 miles below it, near the village Charamangut *, having slept on shore the preceding night. The number of field-mice on all the plains and even grounds between the Ingoda and the Argun is incredible. They are of a particular, black species, found in the step of the Jenifei (*mus æconomicus*) make, just underneath the turf, spacious nests, with side caves and paths within, where they store up winter-provisions, filling them with various cleaned roots. It is scarce comprehensible how a couple of little animals (for there are seldom more than two mice in one winter-habitation) should be able to dig out such a quantity of roots from the dry turf, carry them

* *The Russians are vulgarly called by the Burats Manguts, which means a Goblin, and is a lasting mark of the old opinion the Burats entertained of them. The founder of the village was black-haired, and was therefore called Charamangut (i. e. black Russian) which name the village retains to this day.*

to their cells ; it being often found that one provision-cave has contained eight or ten pounds of cleaned roots ; and each nest has three or four or more such caves. These mice often dig their nests at a great distance from the cave ; and where they are in great numbers, we see little holes in the turf, from whence they took out the root. They clean them on the spot, and then drag them to their home. In order to convey them the easier, they make flat, little paths in the turf, on all sides, from the opening of their subterranean magazine. The roots they collect are the *Sanguisorba* (in Tunguse *Schuddu*) ; the *Polygonum viviparum*, (in Tunguse *Mykir*) ; and a kind of a meadow-plant, with flowers similar to the wind-flower, *Chærophyllum temulum* ; which, from its stupefying poison, and dangerous effects, cannot be eaten by any human being. The Tunguse say the mice gather these roots, in order to intoxicate themselves on their feast-days ; and indeed this pernicious, little root, resembling a turnep, is devoured by the mice with the other roots. In the higher steps of Dauria is a light-grey species of mouse, smaller than these, the *mus socialis* ; which I have described about the Jaik. It leads an almost similar life, and makes cells about its nest, which it fills with the onions or roots of a cinabar-red lily (*lilium pomponium*) and a small tasteless leek, (*allium tenuissimum*) which grows on the sand. Those about the Jaik store up the tulip-root.

No where does the industry of these little animals become more useful to men than in Dauria, and some other districts in the east of Siberia, where the pagan nations, without agriculture, act with these poor, little creatures, as do unjust lords with their tenants. They are the peculiar object of the Tunguse, who, by plundering the cells of these field-mice, often live during a whole winter. When these animals have filled their caves in autumn, the Tunguse go in search of their holes, which they call *Urgan*, and feel with their foot, or the handle of their spade, where the turf is soft, and seldom fail to hit upon the nest, or some provision-cell. They immediately know all forsaken holes; and when they see the little paths not recently made hollow, the earth-holes not cleaned, and no traces of digged roots in their neighbourhood, they pass them by, looking for the well-stored caves of the fugitive mouse, and, pulling out the poisonous roots, carry away the remainder. The *Sanguisorba* root is in form like the former, but not so tough, nor so white, and, may easily be distinguished from the black *Sanguisorba*, which the Tunguse are fond of drinking, as tea. The mice save their lives at least from these robbers; but the wild boars, who live on roots, as do the Tunguse, and are their rivals in this respect, search diligently for these *Urgans* or nests, and often devour their benefactors and provisions together.

Mr.

Mr. Gmelin relates something similar of the marmots, which abound in Dauria; but these neither make their holes flat beneath the turf; nor do they fill them with roots, spending the winter in a state of lethargy.

Along the whole course of the Tura, as also, in general, in the mountainous country between the Ingoda and the Onon, are no Russian habitations, except a few villages on the former; nor is any agriculture going forward, though the place is fit for it. The Chorinzian Burats wander about here in summer with their flocks, and some poor, Tunguse tribes; not only poor individually, but poor in people, wishing to get a livelihood about the Russian villages, are constant inhabitants of this district.

None can conceive a more magnificent sight than the woodless and steep mountain along the Onon, whose southern side was enamelled with the peach-coloured bloom of the wild, Siberian apricot; and its north side with the deep-purple blossoms of the *Rhododendrum Dauricum*. Through my whole travels I never saw so romantic a region. On the 19th of May I rode along such mountains to Akfchinskaja, where I found a ferry-boat ready to carry me across the Onon. This is a fortress, erected in 1756, containing one church, the regency, some store-houses, officers houses, and eight caserns. The house of the

commanding-officer was burnt down last year, and is not yet rebuilt. As the number of the working garrison is but small, the fortifications are not yet completed. The common dwellings, of which 10 new houses for colonists make the greatest number, will, according to the plan laid down, when they are increased, form a regular suburb without the fort, which was erected to quarter a number of light troops, to keep the country free from several gangs of fugitive Mongols, famous in this country for robberies committed by them as far as the Russian boundary. At that time 400 Tunguse entered the Cossack service, who, with as many Cossacks from Nertschinskaja, occupy the frontier guard on the Onon and Argun, and on the western side of the partition-mountains. The posts are guarded with Cossacks from Selenginskaja and Irkuzkaja, and a party of Mongols, subject to Russia; of which, in case of necessity, 1700 men must perform regular, military duty. On the Daurian line half of these troops are divided on the frontier guards, each commanded by a corporal of militia; the other half is together in troops; and have their quarters, at proper distances, in order to be ready, and in motion when required. By degrees, these frontiers, like those of the Irtysh and the Ob, will be guarded by a line of fortresses and posts, wherever the situation of the country will admit of it, the plan being at present regularly laid out.

I stopped

I stopped at Akshinkajattill the 25th, in order to acquire some knowledge of the country, and of the rattle-chace against the step-goats or antelopes. These chaces are the chief delights of the Mongols and the Daurian-step Tunguse. The Mongols call it *Ablachu*, and the Russians *Oblawa*. They are chiefly performed in an open district, towards a mountain-river or wood; especially in autumn, when the horses are strong. Parties of 100 or 200 men, who ride well, and have several horses, are all armed with bows and arrows, and each has a skilful hound, thus making a pack. They elect a chief, who regulates the chace as long as it continues; dispatching in the morning, where they mean to throw off, three or four sharp-sighted men, who are to look out for game; then follow them, and if these see it in flocks, they stop till the whole body of hunters join them, giving signs, by turning their horses to the side where the game is feeding, and shewing them in the same manner how they are to divide. After this signal, the body divides into little parties, disposing themselves into the form of a large bow, one man not more than 60 or 80 fathoms from another. The end of this moving-bow approaches the place where the game is said to be, and the hunters hide themselves as much behind the heights as they can, till they have enclosed it. Then the whole circle draws nearer together, and as soon as the game is aware of their danger, and takes flight, the whole body rushes after it, full-gallop, drive it to-

I 4
gether,

gether, and shouting, kill it with whizzing-arrows*. With this weapon the Daurian step-nations perform regular, equestrian exercises. If, in the course of the chase, there is any river, or woody mountain, the sport is the greater; for the antelope of this district will never cross any water, let the hunters with their hounds be ever so near: they will rather try to save themselves by jumping. They are almost as shy before a wood. As soon as they are driven among the trees, they become so bewildered and frightened, that they will not run 100 fathoms further, but knock their heads and bodies against the trees, and sink down breathless. The hunters are no losers in either case; sometimes wolves, and other animals of prey, are by chance within the circle, and their skins add to the gratification of eager pursuers. If the district be all open, the whole party must strive to conceal themselves, until some have brought the game within the circle with their whizzing-arrows.

** This kind of arrow is called by the Russians Switstung, by the Mongols Dfi. It is a heavy arrow, with a rhomboidical, sharp, iron point, five fingers broad, at the lower end of which is a hollow, bone button, which receives the air through holes. When such an arrow is shot with, it makes a hissing noise through the air, and where it falls, makes a broad and mortal wound.*

The

The Bird-Cherry was now, May 20th, just entering into bloom, which will lead my readers to judge of the influence of the Daurian climate upon plants.

All the rivers which flow through Dauria, and empty into the Amur, are plentifully stocked with fish, and particularly those fish that are rare in some Siberian rivers. There are two sorts of scale-fish, one uncommonly delicious, called by the Russians *Kon*, because it saves itself, by its incredible swiftness, from the nets. Small barbels, met with throughout Siberia, are also here; the Russians call them *Sfan*; and their little shape and bitter taste only distinguish them from the Wolga carp. Here is also a small species of shad (*Som*,) and a species of bjeluga, which comes singly through the Amur into the Onon and Ingoda, and is called here *Kaluga*. Common pikes are here gold-coloured, and variously spotted, like Indian fish. Besides these, the Onon has common sturgeons, Lenki, Taimeni, and a species of large *salmo oxryncus*, known in the Baikal by the name of *Morskoï Sig*; crabs, and a variety of small fish. The common slime-muscle is found here, on the lakes, of an enormous size. I received some shells above half an ell * long, and between three and four inches thick. The Onon, which flows here over a more stony ground, throws out, on the banks, cornelian and onyx pebbles,

* *A Russian ell is three-fourths of an English yard.*

which

which would be of great value, if large, or cleft-left pieces could be found. Pieces of green, yellow, and striped jasper are quite common, of which there must be some in the mountains, which the Onon breaks through. The above cornelian and onyx stones are said to be more abundant and finer about the Argun. The wilds of Gobei, in Mongalia, are most famous for such stones, and are considered as their native place.

On the 23d of May they brought me, from the Tunguse chace, antelopes (*Deeren*) of various breed and age; and I busied myself the whole day in dissecting and describing them. What is most particular in these animals, and which no other species of antelope has, is, that with the bucks-horns the *larynx* also grows to so enormous a size in all its parts, that the old ones look as if they had a large wen. They have also underneath the fore-skin of their bellies a wide, oval bag, with a peculiar opening, exactly similar to the purse or bag of the Moschus, except that the antelope's is quite empty. Perhaps it may be filled with some matter in the brimming season; but the above season is late in autumn, and they get their young only in June, when the Sanana, or purple-lily is in bloom. Their young, if brought up in houses, become exceedingly tame, so as to run about the house, or abroad, as they please, and will never go away; but, if pursued by a dog, will fly to the house. On the
open

open steps, however, they are very wild, and swifter than the Saiga, and will not suffer the huntsman's approach.

The Daurian sheep are incontestibly the largest in the world, and far surpass the Kirguisian; they grow and fatten by feeding solely on the rods of the bush *Robinia Caragana*, which the Tunguse call *Altavana*.

I meant to sleep, on the 27th of May, in Kubuchai-ku; but, having received intelligence, by an interpreter I sent on before, that the Tunguse had killed a step-horse, I determined to ride the whole night, to save this rare animal from the corruption of the present, hot weather. My guides took this night a wrong way on the step, on which there is no road, but where travellers direct their way by the sun. We were already seven miles from the fortress, towards the Mongolian frontiers, and, seeing the error of my guides, I took out my compass, and shewed them the direction we were to steer. Before day-break we arrived at Salsutschinskoi Karaul, where I stopped to breakfast; then hastened to the guard-station, Kulussutai, a distance of 60 miles, since I last slept. Here Mr. Sokolof and I parted, for I dispatched him on a tour along the Argun to make his observations on the vegetable kingdom of that district.

In

In the wild steps about the Tarei are continually seen, at a distance, that species of wild step-horse, called by the Mongols *Dshiggetei* (long-ear). In the Mongul country, particularly in the wide, waterless step of the Gobei they are said to be met with in large herds ; but that within the Russian frontiers, since so many guard-posts have been erected, seldom any such herd, headed by an old stallion, and consisting of from 10 to 30 mares is to be met with ; but only a fugitive, young stallion or mare, which has run singly from the Mongolian side, pursued by the old ones ; and these are only found on the steps about the Tarei, and the utmost corner of the district of the Argun, near Abagaitu.

These *Dshiggetei* can neither be called horses nor asses ; they are, like mules, between both. Hence it was, that Messerschmed, who first observed this animal, came to call them fertile mules (*Mulus Dauricus fecundus*). Mules they are not, but a genus of their own, and have a much finer shape than a mule. That kind of step-ass, called by the western Kirguese *Kulan*, is not to be taken as such ; for the latter, according to the truest accounts, are but wild asses of *Onagor*sof, which inhabit the mountainous steps of Western Tartary, as the *Dshiggetei* do the Mongolian deserts. The latter has certain beauties, which render him far preferable to the ass. An uncommon, light body, slender limbs, a wild, fugitive appearance, and fine-coloured

loured hair, are his advantages over the afs. The ears also are better proportioned than those of a mule, and, being livelily erected, suit him well; and, with these beauties, it may be over-looked that his head is rather heavy, and his hoofs like those of an afs. The straight, angular back, and the ugly cow-tail, are it's only deformities. It's head is clumsy, it's breast large, cornered below, and somewhat pressed together. The back-bone is not like that of a horse, hollow and round, nor as straight and angular as an afs, but calf-like, bent outwards, or rising in the middle, and obtusely angular. The ears are longer than those of a horse, and shorter than a mule's. The mane is short, wild, and perfectly like that of an afs; and so are the tail and hoofs. The breast and shoulders are narrow, and not so fleshy as those of a horse, and the flanks and hind-quarters are rather lean and thin; the limbs slight, and tolerably high. The colour is a light-yellow brown; the nose, and the inside of the legs of a fallow-yellow; the mane and tail blackish; and along the back-bone runs an elegant brown and black stripe, broad along the croup, and slender towards the tail. When the animal stands, it carries its head high; and if running, stretches its nose in the air. That which I had an opportunity to dissect and describe at Kulussutai, was a mare, three years old, which was caught singly, and killed upon the step. Two young stallions were killed a little before by the Tunguse, and their flesh, which they esteem

esteem as the greatest dainty of all game, was eaten. This animal had now its long and woolly, winter-hair, which looked somewhat more fallow, and was very smooth and shining. The swiftness of the Dshiggetei surpasses all imagination, and is therefore become a proverb among the Mongols—No horse, ever so swift, can overtake it; it can therefore be only killed from a hidden retreat, where the wind is against the huntsman, and when the animal comes within reach of his arms. The most numerous rattle-chace would be incompetent to catch them. No sooner does a herd of these animals see any thing suspicious, for instance, a huntsman lying, or creeping, on the ground, at a distance, than the stallion and guide of the herd runs in a large circle twice or thrice round the object of his fear, and then, with the whole herd, takes his flight. Hence it happens that mares are more seldom killed. If the mares lose a stallion, the whole herd scatters and divides, and thus often fall a prey to the hunters.

Were there a possibility of taming these animals, there would not be better coursers in the world; but their wildness is not to be overcome. If there had been any means of taming them, the Mongols, and other Asiatic nomades, into whose hands so many colts fall, would have effected it. It is remembered that on these frontiers, many years ago, a Cossack of Nertschinskaja fed a captive Dshiggetei colt, and endeavoured, for several months to tame him; but it remained

mained wild, and at last killed itself by forcibly jumping. Yet, with proper prudence and care, other attempts might be made with very young foals, caught a few days after they are dropped, which, perhaps, might not be in vain. It would be worth giving a premium to those that should succeed, as it would be obtaining a new, domestic animal, that, by its speed, might be very useful.

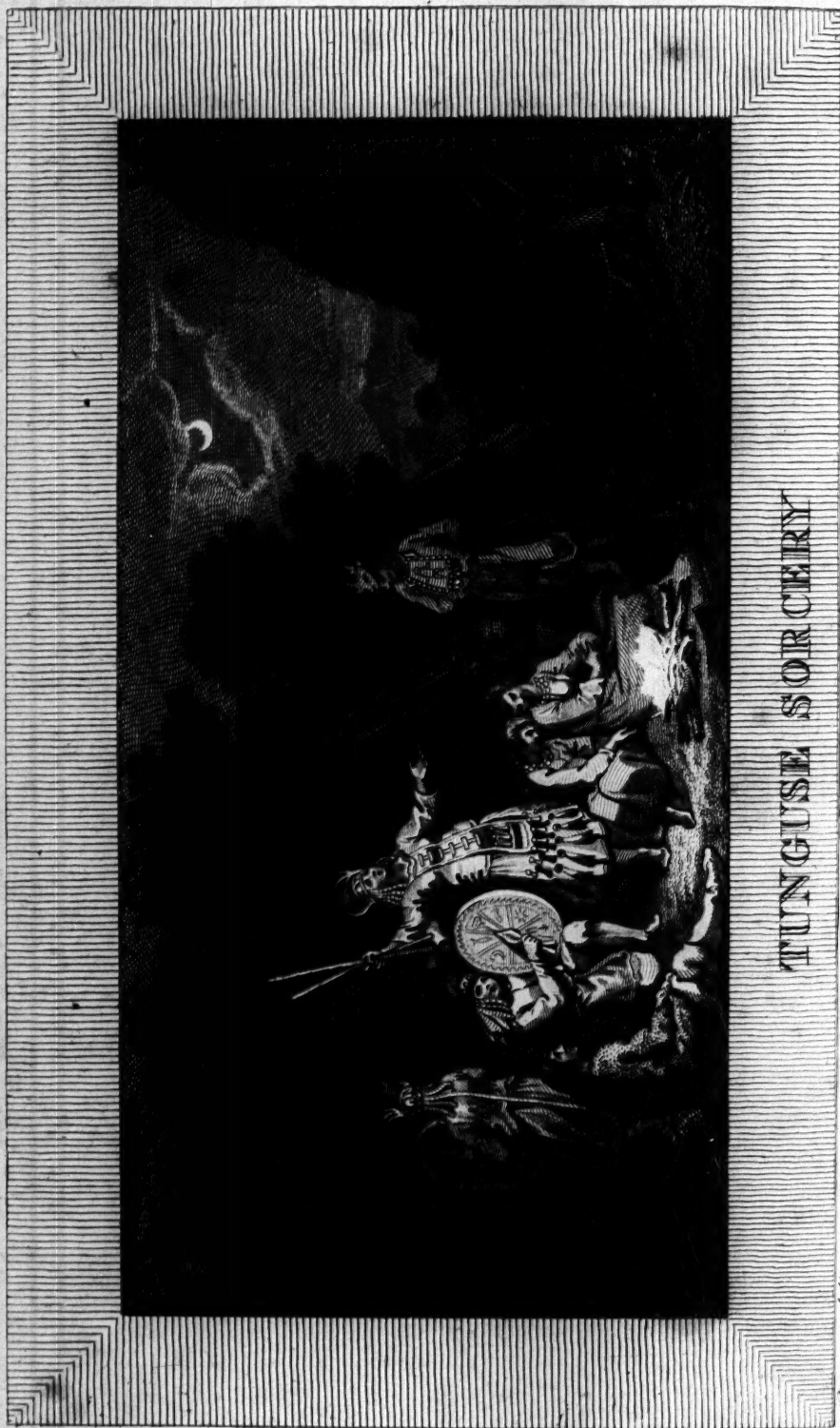
Mr. Sokolof left me at Kuluffutai, but I remained here till the 31st of May, and was so busy in describing the various, natural curiosities, especially of the animal kind, that were brought me, that I had scarce time to eat or to sleep. The richer the little district towards the Argun is, in little lakes and marshes, the more it abounds in water-fowl. There are a great many, not only common, but also Indian crows (*Ardea Antigone*) and what they call the Numidian Virgin (*Ardea virgo*, *Demoiselle de Numidie*); also bustards of an enormous size, and cocks, which are called by the Mongols *Sachaltu*, on account of their fine-feathered beards, and having, under the tongue, the opening of a wen-like water-bag, the size of a large goose-egg; the bird often weighing above 30 pounds.

In these steps resides also a very remarkable, little animal, which is even more abundantly to be found on the Selenga, known in Dauria by the Mongolian name of *Ogotona*. It has the greatest similitude to the
smallest

smallest earth-hare (*Lepus pusillus*); and with the cliff-hare (*Lepus alpinus*) which I have described. The difference between these three little animals is much more than between the common hare and the rabbit. The Daurian earth-hare is about the size of the cliff-hare, but of a pale-yellowish, grey colour. Its ears resemble both the other species; are large and round, the head obtuse; short feet, with the usual divisions, and no tail. It burrows in the sand, like a rabbit, and leaves its holes only about noon or night to feed, which it does on the bark of the Daurian (*Pyrus baccata*) on which account it inhabits the islands and banks of rivers. In the morning and at night we may hear their shrilling and whistling voice, where they dwell. Towards autumn, they gather, about their holes, little round heaps, of about one foot in diameter, made of all sorts of plants; and, with the grey, mountain-speedwell, stuff up all the passages to their holes, but fill them again if consumed, and the weather be severe. This animal is the usual prey for the step-cat, so common in Dauria.

On the 30th of May I entertained myself before my departure with a clever, Tunguse witch, who was at a relation's in this neighbourhood. She came, as soon as it was dark, near a fire, lighted before a tent, and some young lads carried her dress, magic drums, and crutches; she had also along with her a great number of young women and girls, to assist them in sing-

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TUNGUSE SORCERY

Burney delin.

Naigle sculp.

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singing. Her dress, which she put over her bare skin before the fire, was similar to that of the Chorinzian forcerefs, viz. a leather-robe, ornamented with a great many iron, rattling toys, and brass ornaments; and from it hung down behind, from the shoulders, a quantity of varied-coloured serpents, or tails, each of which had a little bell. On her cap were leather-horns only, instead of iron ones, and on her shoulders she had also some figures of frogs. Her drum was more than an ell in diameter, and was first warmed over the fire to give it a deeper sound. She took it first in hand herself, put it down on the north side of the fire, ordered the choir of women to sit before her in one row, and the men round about in a circle; then began, turning her face to the north, and made her incantations with a terrible voice. At last she gave her drum to her husband to beat, and began to leap with the crutches in one hand, then raved, made various contortions, during which she pretended to be out of her mind, by hiccoughing, imitating the voice of the cuckow, and other odd sounds; and in the end, whilst she was singing, a question was read to her, which she pretty well guessed. After this she asked for brandy, and being desired to answer some more questions, replied, that she could command but three spirits, one every evening; one of which, she said, lived towards midnight, one towards morning, and the third towards evening; she could therefore answer no more than two questions. She then began her conjurations to-

wards evening, and called upon her aerial spirit, *Darold/she*, often looking up to the shining moon, with her hands over her eyes, as if she saw something coming from far. When she was to answer the third question, she repeated her magic hymns towards morning, and all the questions we had made false, on purpose to deceive her, she guessed so well, that it astonished me, and made me almost suspect my interpreter had told her how to act before-hand. The Tunguse said she had not been instructed by any other magician, but formed herself, and, whilst a girl, had lived a long time in a foolish, melancholy state; but the Cossacks assured me that her master was an old forcerer upon the Onon, to whom it happened that his cloaths were stolen away by some professors of the art travelling, at that time, in this district; and that since this, he had left off his business.

I had now, on the 13th of June, an opportunity of enquiring into the nature of the mineral spring mentioned before on the brook Pogromna. This well has not been dug more than four or five years, and is similar, in quality, to the Seltzer water. I shall not determine, from any experiments I made myself, as the well was not now in perfection; but from the experiments of Mr. Georgi, made the autumn following, at my recommendation.

From

From a variety of experiments then made, by this gentleman, it may be collected, that the mineral spring of Pogromna contains a great deal of æther, a strong mineral alkali, a small degree of iron, and a still smaller quantity of chalk, such as may be met with in all pure waters, and a very little selenites, which the sulphureous smell of the residuum on coals demonstrates. To the first three ingredients the known efficacy of the water ought to be ascribed; and it may arise from the superabundance of æther, that the Russian peasants who drink this water, as do the Burats, (but immoderately) as a cure for disorders, or whenever they pass this way, feel a certain heat, and giddiness of head, which has given to this spring the name of *Pjanaja woda*, i. e. intoxicating water. This effect neither I, nor my people perceived, who drank of it; but afterwards we felt an irritation of the nose, like that excited by wine, or beer, rich with æther.

The Burats use it against all disorders, and even to cure lameness; and come here, annually, to bless the well with prayers, for seven days, three or four times a day. Drinking it renders them very weak, and somewhat feverish; but many find a cure in all kinds of disorders. They know nothing of any pernicious, or mortal effect it has; and we may readily see in two cases related by the Russians, that it is only by an immoderate use of it, preceded by some disorders, that makes it fatal. Round about the wells have

been hung, on bushes, all sorts of rags, and shoulders of sheep and oxen-skins, on which were written the names of those who had received benefit from the waters, their cure, and the blessed day of their recovery. Near one well (for there are three or four) stood a long staff, with two cross sticks, on which hung little boards, with Tangutian prayers, which turned with the wind.

On the 20th of June, at night, I reached Selenginskaja, which lies on the right border of the Selenga, quite encompassed with sand mountains. In all the Islands of the Selenga, of which there are many, the little, sand-hare (*ogolona*) was seen in great abundance. The Mongol boys, who are fond of roasting these little animals, are peculiarly skilled in catching them, and call them *alakdaga* (speckled colt). Both Mongols and Burats told me, that these rare hares do, as they say the common hedge-hog does in England, and the large house-toad in Russia, respecting cows, and the night-swallow respecting goats; that is, suck their udders at night. This, however, is certain, that they are seen, at night, among the sheep-flocks whom they frighten by their jumps.

I now determined to return to Kjachta, partly to give them an account of what I had met with on the frontiers between Russia and China, where I had been, and partly to examine into the beautiful, southern districts

tricts about the Selenga and Tschikoi in this season, and to collect the plants that had attained their perfection. I took, therefore, the usual road to Petropauloffskaja-Krepost, where is established on the upper frontier, a custom-house, that collects a duty on all goods carried to Kjachta, and examines all goods and bales brought from thence, that nothing may be carried away without being stamped. For this reason the side-roads are stopped against merchants; and the corner between the Tschikoi and the Selenga has a barrier. To reach the fortress, the Tschikoi is to be crossed, which, a little farther downwards, falls into the Selenga, from whence the fort took its old name, Strjelka, which implies a cape between two united rivers, and agrees well with the former situation; for it was formerly situated in the very corner, where both rivers meet. The goods which are brought from Kjachta by land, pass before this place in barges, and are carried down the Selenga, over the Baikal, and then farther on, on the Angara and Tunguska, into the Jenisei; and those barges arriving from the Angara, over the Baikal, are drawn up the Selenga to this place.

On the 24th of June I left Poworotnoi, the first station on the road to Kjachta, at 15 miles from Selinginskaja, on the left, and went straight towards the Selenga, to see a Mongolian house of prayer, erected at the common expence of the three Tabungutian tribes; and then went on to Kjachta, the road to which is

fenced in on both sides with hedges, and where I arrived on the 26th. I left it again on the 28th, in order to go to Selenginskaja, which I reached on the 30th of June. Two days before, I was a spectator of an extraordinary, pagan worship, ordered by the superior Chambo-Lama, out of compliment to me. It consisted in a formal, solemn blessing, which he performed himself, and assembled on the occasion a great number of his clergy.

I was employed some days in Selenginskaja in collecting several things relative to natural history, and arranging what I had hitherto collected. In the meantime I ordered every thing to be ready for my return to Krasnojarskaja, and was thus able to set out for the Baikal on the third of July.

Mr. Bykof, whom I had left in spring about Selenginskaja, to collect plants, I ordered to remain, and, if possible, to go up the Dzhida, along the frontier guard-posts, as far as to the high mountains of Tunkinskaja, to gather every remarkable plant he could find, make other observations, and wait in Selenginskaja the arrival of Mr. Sokolof from Dauria, and return with him, in autumn, to Krasnojarskaja.

Before I take my leave, however, of this district, I will add some general observations on it.

I must

I must own, that upon the whole Siberian line, from the Uralian mountains, which may be considered as the line of boundary between Europe and Asia, quite to the Baikal, I have not been able to collect so many new and curious animals and plants, as in that track of land bounded by Mongolia, and on the north by the Baikal. It is certain, that on the Jenisei, especially its upper and southern districts, which are by nature similar to those of Dauria, many natural curiosities are to be found, especially in the botanical line, which are not to be met with in the western parts of Siberia, or on the loftier parts of the Altai mountains; but these productions are no where so copious, so perfect, and genuine as in Dauria, and all the mountains situated beyond the Baikal. I say mountains, because the whole country is mountainous; for even the plains may be considered as broad vallies, and are situated on heights, towards the west of Siberia, as the generality of Siberian mountain-plants, which grow even in the lowest vallies, incontestibly prove, without making any observations with the barometer. Besides, the very high, woody mountains, which have their greatest breadth from the Baikal to the source of the Selenga, forming, with the Sajanian mountains about the Jendred, a mighty chain, which spreads more towards the east, and joins in one part with the western bay of the Baikal, but turns, with its principal track, towards Mongolia, and goes on over the sources of the Jenisei, Selenga, and Tola, and then divides into those branches,

which separate partly the brooks of the Amur from those of Siberia; partly its principal rivers, Naun and Scharamurin among themselves; and partly the brooks of the Amur from the Choango: besides these towering, chief mountains, full of numerous cupolas, covered with snow, and cold, woodless summits; all the space between the Baikal and the frontiers is mostly full of dry, open, torn, and very steep mountains, intersected with sandy vallies and plains; on which it is clearly evident that the sand originated in the withered, small particles of the matrix, and was carried away and spread by winds, rain, snow-water, and other streams. For most mountains in these parts consist of decayed granite-rocks, and other very ancient matrices; and, in some few places, strata are to be seen; the stratum of all the mountains first appearing northwards from the Baikal, and in the upper district of the Lena.

As the mountains, both in the district of Selenginskaja and Dauria, are very steep and rocky, and are often nothing more than projecting cliffs and towering pieces of rock, they exhibit an awful sight, and fine, magnificent prospects. Such a country must afford abundance of curious bushes and shrubs, peculiar to such soils; and a variety of mountain-plants, as well growing on the mountains themselves, as in the vallies beneath; some of which are shady, cold, and narrow, and others open, warm, and sandy: and in many places,

places, depressions and low grounds, often enriched with salt-spots. Hence also must be ascribed the great difference of the warmer and colder situations, in districts adjacent to each other, and in the same latitude. For example, about Selenginskaja and Kjachta, all sorts of garden-stuff, even water-melons, will prosper in the free and open ground; and many rare plants are common, which are generally the product only of warm rocks; whereas in the country, and more to the north, situated on the Uda, not even corn will ripen; so again upon the Baikal, under the shadow and cold of the southern, adjacent mountain, plants grow even to the borders, which otherwise are only common to the frigid mountains. Also trees bud later, snow falls sooner, and the winter is longer, than 100 miles further up the Selenga *. This influence of the high situation, unsheltered against the cold, in the climate of the mountainous districts I have mentioned, must be considered as the principal cause of the east of Siberia, especially the district south of the Baikal, being colder than the western countries, situated under the same latitude. All Dauria enjoys a mountain-air; it lies also exposed to the northern winds, which send

* “ We have read, in a description of Norway, that it shall, apparently, be winter on the northern side of the lofty mountain of Filefield, when at the same time it shall be summer on the southern side, where it receives the benefit of the sun.”

their

their chilling blasts from the glacial sea, even in summer-time, through Siberia, where they cause uncommon cold. Is it then any wonder that the weather is much sharper here than in the more western parts of Europe, encompassed by seas, which alone renders the air much softer?

Firs are the most common wood in Dauria, on the Selenga, on account of the sandy soil. The higher and colder mountains have larches, white firs, red and white pines, birches, and asps, promiscuously; and the underwood consists of birch-bushes, the Bagulnik, (*Rhododendrum Dauricum*) and various species of willows. The higher cliffs, snow-clad throughout the year, had on their summits some few, creeping trees, or none at all; perhaps some little shrubs of pines, cedars, larches, dwarf-birches, and some species of the plane and savin-trees, and some particular small willows.

The consequence of this general description is, that Dauria, and the district of Selenginskaja will never become so populous, or so general a corn-country as the rest of Siberia, situated not so much to the north; there being every where, even in the vallies and plains, many tracks, nothing but rock and sand, which no other people but the Mongols and Burats can turn to advantage. But as these nations will soon scarce find space enough to support themselves, owing to their increase,

increase, as is evident about Selenginskaja, it would be policy, in order to bring agriculture to its highest pitch, to remove some part of this people into other districts; for example, to the sandy-salt-deserts about the Irtysh or the Baruba, these places being now left to the treacherous Kirguese, who never will become husbandmen.

Selenginskaja.—I will now say a few words of the town of Selenginskaja, and its dependencies. It lies chiefly on a shallow, sandy arm of the Selenga, fordable in many places. Behind the town are some high, sand mountains, from whence the streets now begin to be overflowed with sand. These mountains are at the same time richly clothed with timber and underwood, quite down to the river. From the river's-side the place makes a good appearance, with its three churches, and the house of a commissioner of state, now uninhabited. The place is fortified with four, timber ramparts, and towers within the angles. Within the walls is a court of Waywodes, and a court of boundaries; a house for the commanding-officer, another for the president, and a guard-house, all within a square. At the upper end are gardens, and a corn-mill, worked by horses.

Though this town is advantageously situated for the Chinese trade, here are but few, substantial merchants. Most of the inhabitants are of the middling class; the cause of which probably is, their carelessness, and inclination

clination to extravagance. Many of the citizens scatter themselves, and live in other places, in order to be duty-free, and lead a more indolent life, in agriculture and breeding of cattle. Farms, nay villages, founded by people of this description, may be seen just opposite the town, on the left bank of the river. Many of the towns-people, and those of the country round the town, shew a great mixture of Mongolian blood; the most substantial of them having long been in the habit of marrying Mongolian and Buratian women; and, to make an advantageous alliance with these people, some Mongols will have their daughters christened. There have been instances about this place, of the Burats themselves embracing the christian faith, in order to espouse the daughter of some wealthy Russian. From such mixed-marriages spring many mulatto children; these retain something of the Mongolian face, and have black, shining hair, but have, at the same time, the most regular features, and the sweetest countenance, called, in Russ, *Karymki*; of course the Buratian manner of living is almost as much in use in this district, as the Mongol, or Mongolian language.

Under the jurisdiction of the court of Waiwodes in this place are the following towns: Baicharozkaja, Urluzkaja, Muchorschibir, and Tarbagantei; also the following places, with their districts: Itanzinskai Ostrog, with 20 little villages, mostly situated on the
little

little river Itanza, and containing 371 peasants; Archangelskai, to which belong six villages, Jlinskoi Ostrog, and Pokrofskaja, all together situate in the neighbourhood of the Selenga, and its little brook, and containing 141 peasants; Kudarinskaja, at the mouth of the Selenga, with seven villages on the adjoining step, containing 293 peasants; Kubanskoi Ostrog, with its five villages, and 296 peasants; and, lastly, the district of Dshidenskaja, containing seven villages, besides Bainchuffun, situate on the river Dshida. Also six other towns on the Dshida; one on the Selenga; one on the Ira, of 95 peasants, colonists, comprehending all together 279 peasants. To these villages may be added 2520 old inhabitants of the towns, and 1534 colonists, 102 peasants dependant on the convent of Terizkaja, on the Selenga; and 138 depending on that of Polsolskaja; also near 100 citizens, and somewhat above 900 Burats and Mongols, which is the whole population of this district encompassed by the Baikal, the Chinese frontiers, and the great partition-mountains. Bargusinskoi Ostrog is also reckoned in this district, which contains 1600 Tunguse, paying tribute. If to this is added the district of Nertschinskaja, properly Dauria, subject to the Russian sceptre; which, except 16,000 Burats and Tunguse, 10,000 of whom live in huts round the Argun, scarce contains 11,800 men; near 3000 of whom are colonists, sent here within these 15 years, the whole population of the country beyond the Baikal, which is

525 miles in length, and from 150 to 375 in breadth, amounts only to about 43,000 full-grown men.

The district of Selenginskaja, like all others situated about the Baikal, is sometimes subject to little earthquakes. In 1768 two were observed in Irkuzkaja; one on the 18th of March, at four in the morning; another on the 5th of August, at four in the afternoon. On the 13th of October, 1769, at eight in the morning, they felt a double shock, the last pretty strong; in 1771, July 28, about nine in the morning, they had a strong earthquake at Irkuzkaja; and at 11 o'clock the same morning, in Selenginskaja, which was felt also in many places. The sphere of these earthquakes are generally not very extensive. They are never felt in Dauria, and the northern parts of the Lena; so that the cause of them must be hidden in the mountains situated close about the Baikal, and their warm springs; peculiar pebbles, and the bitumen which the lakes throw out, are evident proofs that there is no want of materials to occasion such subterranean heat and motions. Probably the earthquakes observed in the Altai mountain originate from that spot where the Noor Saissane is encompassed by mountains.

It was noon, on the 3d day of July, before all the horses required for our departure could be brought together, and my waggons could cross the Selenga. I did not take the usual post-road, but went straight
towards

towards the lake Gufinoi ofero (*goose-lake*) to which the deep and sandy valley Tojon leads, and which commences at the hut-mountain behind the Selenga. We reached the lake just before dark, during a violent tempest and deal of rain, and took our lodgings at the north end of the lake. A number of rare plants decorated the sands, which I gathered the next morning; and, among the rest, a peculiar species of Robinia, hitherto unknown to botanists (*Rob. ferox*) which shot into high bushes and thick branches, often seven feet high. This species of the false acacia-thorn deserves cultivation in Europe, on account of its usefulness; it being very short, with long thorns, and spreading on the ground, would make exceeding good fences, through which neither man nor cattle would be able to penetrate. The soft points and leaves are also an agreeable food for sheep; and its pods, which are without number, would at least answer the purpose of vetches. It is remarkable that this fine bush, which displays in spring its numberless sulphur-yellow flowers, should nowhere be met with in all the districts beyond the Baikal, except in the great valley, which, from the Temnik and Gufinoi Ofero extends itself with the Selenga as far as the brook Ubukun, and some vallies, as far as the Oren-goi. The Mongols and Burats give it no other name than what they give to the smallest acacia-thorn (*Robinia pygmaea*) viz. *Charagana*. It grows as well on the moist and salt-depressions, or low places, as on drier and

and sand-spots, though it prefers the former. It is said to be very common about Peking, where all the level country is somewhat moist and salt. It was well known to the Russians, who went there with caravans, because the Chinese planted this hedge against the walls which surrounded the caravan-house, it being as good as so many centinels, to hinder any one from climbing them.

This lake is deep, and if the wind blows ever so little, carries large billows. They say it was much smaller formerly; but that, about 15 years ago, in the month of May, the river Temnik, which is at a considerable distance, swelled by a sudden flow, blocked up its own bed with sand and floating wood, and made itself a fresh channel, changing a neighbouring valley into a great lake, part of whose waters have added to this lake. The new channel which the Temnik made is called by the Mongols *Zagan*, i. e. white or holy, from an awful reverence, at having destroyed some of their fine pastures in the low grounds. Few great Mongolian Lamas (for priests seldom make a bad choice) have fixed their residence in this delightful vale, and built two fine temples, one at the north end, and the other at the south. A description of these temples, and the holy offices performed therein, and what I saw when they were going to erect a sacred monument on the mountain, on the 4th of July, will accompany my other accounts collected respecting the

the Mongolian idolatry. The whole valley is so flat, that when the Temnik sought a new channel, they feared a general inundation as far as the salt-lake Solunoi Osero.

Round about this lake, which is not above a mile and a half from the one where we took up our night's lodging, the ground is white, with a bitter salt, and full of salt-plants; its length is about half a mile, its form oblong, and its greatest diameter lies from east to west. Many fresh-water rivulets flow from the north side into it, which lessens its saltiness, and renders the salt unfit for boiling in summer-time. The salt-veins seem to be within the lake itself; for, when the water freezes in autumn, we see spots where no ice will settle, and there the salt-water is stronger. They tried an experiment on such a spot in 1762, and put down a pipe into such a salt-water spring; and, at the depth of more than seven ells, found nothing but slime; but, having felt something hard under this slime, they applied a bore, and brought up a piece of pure ice; and, observing afterwards that fresh water issued from the place, they left it to itself, to seek for the real salt-veins on the borders of the lake. They have made many unsuccessful attempts, and wherever they bored, fresh water has issued out.

The bottom of the lake consists of a blue slime, on which, when the frost comes, a scum, several inches

thick, will settle, consisting of pure Glauber-salts, which, when dried in the air, crumbles into a white, farinaceous substance. Continual, dry weather, and summer-heats, will divide this scum from the salt-water, and it will then swim in tender scum on the surface of the lake, which, at a distance, in the sunshine, has a red appearance, and, by the motion of the water, will sink to the bottom. The water is otherwise clear; has no red appearance, but in summer-time will smell like foul mire. It is not sufficiently impregnated with salt, so as to be fit for boiling till autumn, when it has an ice-crust upon the surface. They begin to boil in November, and continue till the middle of March, when the snow-water from the mountains diminishes its strength. In these four months they procure but 20,000 puds of salt. There are at present two salt-houses, with proper pans, where they boil salt; and they are preparing to erect a third. Within 24 hours a pan is completed, and yields 600 pails full, equal to 1200 common pails, or about 100 puds of salt. The boiled salt is fine, white, granulous, and very pure, but is not to be compared in saltiness with that of Angarskoi. Even what they scrape from the pans is pure salt; this they throw away as rubbish, but why, I know not. The Imperial treasury pays, on the spot, 10 copecs to the boiler for every pud of salt, deducting a duty of 11 per cent. When proper agreements are made, the salt is transported to the store-houses, or wherever it is wanted. The wood they
use,

use, in boiling, is felled at the distance of three or four miles from the lake, and 16 miles from the Selenga, paying 15 copecs per stack for felling, and 20 copecs for carriage. This would not make the boiling dear, but the iron for the pans is brought from the smithery at Kutunskaja, at 70 copecs per pud, and a pan will not last a whole winter, without mending.

In 1728 there was a boiling-house, with one pan, at the expence of the crown, which was soon after sold to a private person. From this first proprietor the salt-works became the property of the family of the present possessor, Michael Pacholsof, who has, besides the boiling-houses, two neat houses for his own residence; a store-house, in which at present are 15,000 puds of salt, ready to convey away; and also some houses for his workmen.

When I had viewed these works, I made the best of my way to the post-road, behind which flows the brook Ubukun, on which there is a post-station, about 30 miles from Selenginskaja, and seven from the salt-lake. I did not sleep here, but three miles and a half lower down the Ubukun, in a village of six houses erected on it. The road to it is over a moderate mountain, where a stone-searcher had dug some trying-pits on account of a demi-transparent, greenish and amethyst-coloured, flaming spar, which breaks above ground. In the spar lay kidneys of yellowish and

greyish agate. This spot, and the whole mountain, deserves a stricter examination.

At the distance of nine miles from this, the river Orongoi is passed by a flying bridge. At Udinskoi, 30 miles further, where I slept on the 7th of July, I received a number of letters, sent to me to the Onon, but which there missed me; and from this place I sent back my Mongolian interpreters, having no further occasion for them.

Beyond Udinskoi are several little villages, and the step, about the lowermost part of the Selenga, is very fertile and populous; indeed, one of the most populous districts beyond the Baikal, containing from 8 to 900 peasant families, and two convents. On the 8th of July I reached the Baikal sea, where I met with a number of plants peculiar only to cold mountains; for instance, *Cembra Empetrum rignum*, *Campanula rotundifolia*, *Fumaria impatiens*, *Polygonum divaricatum*, *angustifolium*, *et sericeum*, *Scrophularia scorodonia*, *Dracocephalum nutans*, *Lycopsis vesicaria*, and many others. The *Pyrola rotundifolia*, which grows so very large in Siberia, is often here gathered, in case of need, by the peasants, and used as tea. These mountain-plants, which are so generally to be met with on the low shores of the Baikal, arise from the cold and foggy air in summer, from the adjacent, high mountains, and the effect of the snow-clad cliffs, which the
lofty

lofty mountains standing round the Kuluk, or western bay of the Baikal, raise above the clouds.

Baikal.—When I arrived at the convent of Pofolkoi, the Baikal was covered with such a thick and cold fog, as is only to be seen in high mountains, which attract the clouds, or in sea-coast countries, during autumn and winter. It resembled clouds enclosed within mountains, had already continued eight days, and lasted till the 20th of July, during calm weather, amid the breeze of western winds. In the mean time, there fell such a rain in all the high mountains of Dauria, also north of the Baikal, and about the Jenisei, which never had been remembered in these districts, and which continued, with very little serene intermission, till late in autumn, and destroyed the hay and harvest. The spring, and the first half of summer, had been, in these parts, uncommonly dry, and without rain.

The western winds, which usually continue some time in the Baikal, gave me but little hopes of crossing over to the mouth of the Angara; and tho' the Imperial galliot, which served here as a packet-boat, arrived here from the other side, almost in the same hour that I did, yet the passage seemed almost impracticable for a long while. This galliot, called the Boris-O-Gleb, is navigated by a pilot from Ochozkaja, and is, at present, the only vessel that sails in the Baikal, the

merchants using their dangerous dostschenicks, which go with sails, before tack winds only, or else with rudders. A galliot was here stranded, in autumn 1770, not far from the mouth of the Selenga, and was lost. Indeed, galliots are not fit for this sea, which is so narrow ; vessels with rudders, or demi-gallies, would be of more utility.

I occupied myself therefore with collecting plants, and viewing the fisheries usual in summer, in the straits of Posolskaja, till the weather was finer. There is a duty on this fishery, as on other considerable ones, and the convent here receives a certain number of tons, as a privilege. The fishery is carried on, through the whole summer, with drag-nets, 200 fathoms long, which, as the sea is not very deep on this coast, they let out from a barge, with a tackling 300 fathoms in length, which is afterwards taken in, by means of a reel fixed on the shore. In spring, as soon as the ice breaks, they catch abundantly the Sigi morskye (*Salmo oxyrhinchus*) and Lenki, which come upon the sands to spawn. In summer, this fish seeks the deep, and is not caught here, but on the northern steep and rocky coast, which is very deep. At present they caught nothing but what is called the *Omul*, which strays, at this time, in great quantities, on the southern banks, and towards autumn seeks the mouth of the rivers on this side. This fish, about the mouth of the Selenga, is not more than eight or nine inches thick ;

thick; it is these only that are caught annually in the bay of Tschiwirkui, are remarkable for their size, and are caught no where else on the coast of the Baikal. This is a new proof, that fishes, like birds of passage, return annually to the place of their birth, and do not readily spawn, or enter any other river, than where they first received life. The passage of the omuls is known in all districts situated on the opposite side of the Baikal; or the inhabitants of those places, whose slimy rivers do not abound in fish, would otherwise want food for fast-days. They generally come at the Ascension of the Virgin, and as they advance but slow, arrive, about the latter end of September, near Udinskoi Prigorud.

They never enter the Uda, or Chilok, though plentifully caught at the mouth of these rivers, but abundantly visit the Dzhida, the Tschikoi, past Irluzkaja, and the Selenga, up to the Orgon; and when the ice breaks, return quite spent, and exhausted, to the Baikal, and many lose their life without reaching it. The milder the autumn, the later they enter the rivers; and if the ice breaks soon, return early, and do not go up into the upper districts. The omul comes originally from the glacial sea, and not only enters the Jenisei, but all the rivers of Kamschatka. Through the Jenisei it comes into the Baikal, not only by means of the Tunguska and Angara, but also by the Tuba, and the large lake, Madshar, on the Sajanian mountains.

Having found a wide and deep water in this sea, at its return from the upper river, it would not go back into the ocean, but breeds in this enormous space of water, sheltered from all fish of prey.

The presence of the sea-dog in the Baikal is much more wonderful, as these animals never leave the ocean so far as to enter the rivers; and, at this time, is not observed in the Jenisei, nor the lower Angara; therefore must have come here by some great change in the surface of the earth, or by some extraordinary and rare accident. More rare still is a species of fish, quite natural to the Baikal, called by the Russians *Golomjanka*, which is said to have been discovered but a few years since, though here before, and, perhaps, undiscovered by negligence. This fish (*Callyonymus Baikalensis*) has no more solidity than a piece of fat, and are absolutely full of an oily substance, which, if the whole fish is put on a gridiron, will melt away to the bones. They are never caught in nets, nor alive. It is supposed, and with some probability, that they reside only in the deepest recesses of the Baikal, which in the middle, and not far from the northern, steep, mountain-coast, cannot be fathomed with lines of three to four hundred fathoms. What cause or change in the sea brings them so high is hard to tell. They are commonly thrown out by violent, northern storms, on the coast of Potoskoi, and about the mouth of the Selenga, in summer-time only, when a calm succeeds a storm.

They

They are seen in many hundreds swimming and ploughing the surface of the sea. For many years they were thrown out so abundantly, as to lie in heaps on the strand, like a rampart, and the inhabitants turned them to profit, by boiling train-oil from them, which the Chinese bought up at a great price. In June, this year, but few of them were driven ashore. I received some of them twice, by means of messengers dispatched occasionally to Pofolskoi; some dried, and some preserved in brandy. They appeared for the last time on the 24th of June, and were neither touched by insects, nor crows, probably on account of the rankness of their fat, which melts in a few hours, and sometimes in the hand.

On the 10th, the master of the galliot gave notice, that whoever wished to make his passage must go on board. Every thing to be shipped was put that night on board; but during the whole night the wind blew so hard, west, that the thoughts of crossing was almost despaired of. Those who navigate the Baikal have a particular compass, which marks only three winds; those that blow between the north, east, and south, called *Barguim*, with which the passage from the mouth of the Selenga over the lake is easy and ready, as they blow all from the same place. All the winds between the north-west and south-west, which apparently come out from the large Baikal-Bay, are called *Kultuk*; and those that blow straight north, from the

the mountainous, northern coast, have the general name of *Gornaja Pagoda* (mountain-winds), last but a short time, but are the more dangerous, and commonly, sudden-raging hurricanes, which strand the vessels, or drive them to pieces on the southern, shallow coast; and sometimes, if the sails are not expeditiously taken in, will overset the vessel, or dismast it. Other winds are not so dangerous, as the Baikal has no sand-bank, or shoals, between the mouths of the Selenga and Angara, except a single one (discovered by trading-boats), around which the sea is deep. The depth of the Baikal in the middle, and in the northern borders, is unfathomable. This lake, or sea, is like a huge cleft opened by the torn mountains, in which the adjacent rivers took their mouths. The mountainous coast itself shews everywhere marks of the most violent changes, and, at the same time, of the highest antiquity.

About 11 o'clock at night rose a good, south-west wind, by which a skilful seaman could have easily reached the mouth of the Angara, or pretty near it. Our master thinking he could do the same, the anchor was weighed by his order, whilst he lay in bed, and a sailor, who steered the vessel, carried us over, but further from the mouth of the Selenga than we were when at Pofolskoi. When the master awaked, and saluted the morning, we found ourselves in the Pestshanaja-Guba (sand-bay), above 75 miles above Listwenischoe
Simowje,

Simowje, to which it is but 71 miles from Pofolskoi, measured upon the ice, and paid for in the packet-boat. The wind grew more violent, and would not suffer us to quit the coast; so that our master, without further attempts, ordered his men to cast anchor, and wait for a better wind.

This beginning of our unsuccessful navigation was not so disagreeable to me, as I had enough to employ me in collecting plants on the rocky coast, which were now in full perfection, and some of them very rare. They also fished the whole day on the sands of the bay. On the barest parts of the barren rocks grew, plentifully, the delicate stone-leek (*allium Altaicum*) which was greedily eaten by the sailors. Of all the plants, the *polypodium fragrans* deserves to be mentioned. This rare, fine, and most fragrant fern, is collected from the highest rocks, where it grows out from the clefts, and is called by the Burats *serlik*, and is drank by them as a remedy in most scorbutic and paralytic complaints. It may as well be drank for its fine taste, as if two or three leaf-stalks are added to it, it flavours the common, green tea to the highest degree of perfection. Its smell is so powerful, that it will communicate its fragrance to whole bundles of herbs, and boxes full of paper.

As a small, east wind rose towards night, we weighed anchor, and spread sail; but this was scarce done,
before

before a west-wind blew again, and we were obliged to seek a new anchoring-place, at the lower end of the bay.

On the 13th our captain got out his drag-tackling, and thus hauled the vessel on about 10 miles, where we anchored again. It was a fine sight about the rocks of the Baklanye, to see the innumerable crowds of ravens that were building their nests, and the whole rock covered with their white dung. Some of the crew went towards the rock in a boat, when the old ravens fluttered above the rock, and the young ones, that could not fly, threw themselves from the rock into the sea. On the 14th we advanced a little on, and a gentle gale springing up about noon, we got about 14 miles further, where horses were employed to drag the vessel all the next day, when we anchored afresh. This miserable voyage now became irksome to me, and I would certainly have gone to Irkuzkaja by land, if there had been any passable road: but there being no such thing, I got from the master of the packet his small, flat-bottomed boat, which he had in the galiot, and ordering a little post-waggon I had with me to be placed across it, so that its wheels almost touched the water, I manned it partly with my own people, and partly with passengers, whom I encouraged with a promised reward, left the vessel, with our baggage on board, and rowed for the mouth of the Angara. This expedition almost proved my last. The wind
blew

blew west this morning violently, and the billows raged still more. The sailor who steered our boat, and who had crossed a bay and reached the next cape, wished to shorten the labour of the rowers; instead, therefore, of keeping round by the shore, he attempted to cross a bay more than seven miles over; but we had no sooner left the cape, than the wind blew so violent, and we were carried so far off the coast, that it was with the utmost danger and difficulty we could reach the next cape; for my part, I expected every instant to have been a prey to the waves. In order not to be exposed to a similar danger, we took a tackle, fastened it to the boat, and had it dragged along the coast. We had still great trouble to get past the projecting rocks of some high mountains, which, from top to bottom, had been apparently soft, and seemed kneaded together, cemented by large and small pebbles, carried all round, in the water, by a sandy and limy species of stone, and convinces me, that there must have been some mighty change in the mountains of the Baikal. These rocks could not otherwise have been formed, than by pebbles rolling underneath the water horizontally, and afterwards, by violent convulsions of the earth, changed into mountains of more than 100 fathoms perpendicular height.

After a good deal of anxiety and labour we reached the mouth of the Angara in good time, and in good condition. On the 16th I set out in the evening for
Irkuzkaja,

Irkuzkaja, a distance of more than 40 miles, in the road to which there are way-houses every four or five miles, and arrived there early on the 17th. I stopped at this place as long only as it was necessary, and, on the 22d, pursued my journey to Krasnojarskaja, a distance of 614 miles, the road to which I described when I passed it before.

On the Oka, just below the highest mountain, lies Okinskoi Karaul, the outermost guard-station of the district of Udinskoi, subject to the regency of Irkuzkaja. It is 121 miles from the last frontier-guard of the district of Kjachta, and from the frontier-mark on the mountain Gurban, 103 miles, but from another, situate on the Choin-raban, 105 miles. Measured from the western frontier-guard of Winskoi, it is 115 miles. In almost all villages, from Irkuzkaja, 200 miles forward, I found children inoculated with the small-pox, in this month, July, by the surgeon of Irkuzkaja. This salutary operation has the most prosperous event in this regency. Trials have already been made among the Burats, who reside about Irkuzkaja, whose diet and way of living is so unwholesome, and by this means the small-pox will soon become less dangerous among the heathens, whom it frequently carries off.

Udinskci.—About half way from Irkuzkaja, to Krasnojarskaja, is Udinskoi Ostrog, where I arrived on the 27th of July. It lies on the river Uda, and
though

though it is a place of little importance, has a governor and two frontier-guards, under the command of the governor of Tomskoi. Here is also an inspector of the district of Udinskoi. In this district, which consists of 553 men that pay tribute, they reckon 16 little tribes of heathens, some of Tartarian, some of Buratian origin. These little tribes, scattered about on the wild mountains, are the offsprings of fugitives, the relicks of several hordes, driven from their possessions in Siberia, and who have flown here for refuge. Some seem to be of different origin, speaking a mixt language, between Mongol and Tartarian. The most remarkable is the tribe of Karaskoi, which, like the Koibales and Matoes, on the Jenisei, have preserved the Samjoede language, with little mixture, though there are only 22 men. There are some, small tribes on the mountains, who speak their own language, but I could gather no accurate account of them. The Karaskassians live, like the rest of the mountain-Tartars, by hunting, and have no other domestic cattle than a few rein-deer, with which they remove their household-stuff from one place to another. Their superstition, which, though baptized, they keep up, is the most simple to be met with. They have neither idols nor magicians, but worship the heavens, and the sun. They are ignorant of sacrifices, except that when they have killed a bear, or some other game, they raise his head and heart, on a piece of bark, towards heaven, and beg for a good chace in future.

They

They also shew a kind of reverence, like other Siberian pagans, to certain rivers and mountains, feeding the former, and carrying on the latter a little rice, or tobacco, and leaving it on the place. They bury their dead on a scaffold of forks and bushes, or upon trees, with the head toward the east, or only cover them with bushes. Those whom they affectionately love, they burn. Their wretched jurts are covered with hides, and they dress themselves in skins, seldom continuing more than two or three days on the same spot, wandering about in search of the Sarana, or hilly onion, which makes a chief part of their food. Two bags of farana, or some good cedar-nuts, which contain about three and a half puds, they consider equal in value to a rein-deer; and after this manner they formerly calculated their tribute, which made about 20 rein deer for the whole tribe. But at present they do military duty, in the frontiers of Udinskoi, and pay also their jassak, or tribute, which amounts to about two rubles a man. Their women wear, in summer, broad, round hats, made of twisted reed, but no caps, and instead of stockings, they wrap their legs round with the outer bark of *Lonicera pyrenaica*. I shall give a specimen of their language further on, when I speak of their dialects.

Eight miles from Udinskoi, we were obliged to go down from the heights to the brook Kamenka, through the narrow dale, in which a waggon has scarce room
to

to pass, and on the brook we see fine, lofty banks, where sand-rocks are so tender, that they may be reduced to powder, by squeezing them in the hand.

On the 29th of July, I stopped at Rybinskoi, chiefly to view the Siberian melting of iron by hand-blasts, performed by a smith from the Jenisei. The ore he uses is one of the most remarkable things in the whole empire, and was discovered by a fox that dug up the ground, and was caught at that time by a peasant. It consists of large and small pieces of petrified wood, changed into a rich, solid, brown, iron-stone, and shews even marks of the bark. The smith of this place has discovered this wonderful ore in two spots adjacent to his smithery. The one at three miles distance, on a flat mountain, covered with birch-trees, lying in whole trunks, extending north and south, in a sandy-matrix, much mixed with iron-ochre; the other at the distance only of three quarters of a mile, and lying in the same nature. The metalized trunks, though of the same appearance, will not yield any iron for melting, but the smith got a species of raw iron out of it, which, being coppery, is of little value.

I reached Krasnojarskaja the first week in August, and though the bloom, in this district, was on the decline, and most plants in seeds, yet, through the industry of Mr. Kaschkaref, who was here some time before, and had made many little excursions to the river Mana,

and the Sajanian mountains, I received a complete collection of the plants which the mountains of the Jenisei yield in summer ; but these were chiefly rare plants, answering, in some degree, Mr. Gmelin's account, who says, that eastward of the Jenisei nature changes at once, and has an Asiatic bloom of its own. My curiosity, however, was much deceived by this flattering account. Indeed, the district of Krasnojarskaja, as a dry, open, and mountainous country, has, for this very reason, several rare mountain-plants of its own, and some still more rare to be met with in the more southern mountains, between the Yjus and Jenisei, &c. but no sooner is the Jenisei crossed and left, than the whole country, between the Tunguska and the boundary-mountains, is covered with woods and meadow-grounds, where the bloom is little different from that about the Ob, Irtysh, and even the Uralian chain, resembling those of the European Alps.

I was detained in arranging my observations on the natural curiosities of a five months collection, and in the unexpected arrival of Mr. Surjef, till the 19th of August. He had not pursued his journey from Mangasei to the Frozen Ocean, but had returned from Selakino, situated 475 miles beyond Mangasei, and about 240 miles from the main-sea. His journal contained nothing curious, except a heavy description of the navigation. I shall therefore abridge it, in order not to tire my readers: presenting only such things as are most remarkable.

In the vicinage of Mangasei reside chiefly the baptized Jakutians, whose number amounts only to 127 men. The Tunguse in the Jenisei make out, in general, a nation of 2000 men; 1282 of whom are within the jurisdiction of Mangasei, and the rest of Jeniseiskaja. In the district of Mangasei are 640 Samojedes, 351 comprehended under the name of Eastjaiks, and 479 men immediately from Jeniseiskoi.

Beyond Mangasei the river Jenisei is of a vast breadth, particularly towards Selakino, where it begins to form bays. In some places, where there are no islands, its breadth is more than eight miles, so that the opposite shore is scarcely visible. The right border of the river is every where mountainous, yet the mountains are not high; the left is free from mountains, yet very elevated, and, like the mountain-side, covered with woods. The snow and ice on the border does not melt till the end of June; and in the narrow vallies, excavated by the snow-water, and on the land of the free, open heights, it thaws only to a small depth: for we found often underneath the moss and roots of the little willows, which grew on that moss, bare ice, or hard, frozen ground. Alders, larches, willows and birches, generally bloom there about the end of June; other plants shew their blossoms much earlier; and this is in the 66th degree of latitude. Beyond Plachina were found some petrified muscles, and above Selakino, a tooth, and some other remains of elephants.

The river Jenisei, in its lower districts, is much more peopled with Russians than the Ob, as being more fertile. Chantaiskoi Pogort, 225 miles beyond Mangasei, has, besides a church, only four dwellings, three of which are the habitations of some Russian priests; but there are a great many scattered, single houses, all along the banks of the river, as far as the frozen ocean.

On the 19th of August I left Krasnojarskaja, and the same afternoon directed my journey to the Sajanian mountains; and as I was to travel a road that had not been trod for 20 years, and was marshy, and entirely overgrown with wood, I sent people before, to clear the way, and prepare me passages over rivers and brooks. Some days I could get on pretty well, and some others, I could not travel more than about 20 miles.

On the morning of the 21st of August we had a very difficult road indeed to pass, through a bewildered forest, many marshy defiles and bogs, rendered worse by a two-months rain. We could not cross the mires, but by placing faggots every step before us, to prevent our sinking; yet, with all this difficulty, we made shift to advance 30 miles. We slept in a forest; it thundered and rained all the night, but the darkness of the night added something to the pleasure we received in the sight of a number of glow-worms, which were collected
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in heaps, in rotten leaves and sprays, which shone every where with great brilliancy. They are scarce six lines long, somewhat thicker than a horse-hair, and look like cheese-maggots. These woods are also remarkable for a species of nightingale, with cinnabar-red throats (*Motacilla Calliope.*)

On the 26th I crossed the Yjus, and continued my way up the river, to Kokowo Ulufs, where I spent the night. From this place we see, higher up on the west side of the Yjus, a mountain of a peculiar form, called by the Tartars *Anlo*; it is situated about eight or 10 miles from this place, about three miles from the left banks of the river, and near 27 miles from Karyschkoi Rudnick. The mountain rises gently on one side to the top, and there forms a wide cleft, with a square, rocky precipice, and from the center of the cleft projects a small rock.

This square rock is what is properly called *Anlo*, and is worshipped by the Tartars. Orix Dmittrei, Waffilief, from Tomskoi, who was exiled in his youth from Russia to the huts of Barnaul, has begun a regular mine-work, on a western, adjacent mountain, either from whim, or some imposing view; under a pretence of some treasures being here buried by an ancient Mongol khan, called Altyn. According to his own account, one Samet Arfchanof, a Tartar of Katschinskaja, who had been often sent with Imperial dispatches from

Russia to the Mongols, under the protection of the Chinese, had often heard it said, and that indeed it was an old saying among them, that Altyn-chan had formerly reigned in the district about the Yjus, and having been obliged to retire, had concealed all his riches and jewels in some hidden cavern in the environs of the rock Anlo. This saying is the only reason of their digging. His impostures go still farther, pretending, that on the river Tschulym live some Mongol women, who possess Mongol manuscripts, describing all the accesses to the cavern in which the treasures are concealed.

Hence it must be concluded, and from the character of the man, that he is an able impostor, who, by the above pretexts, has persuaded some credulous people, and some of his own children, who are substantial persons, to advance him money on this project, which allows him to lead an indolent life. He has ordered shafts to be dug in two places, where this mountain has clefts, to the depth of many fathoms, and has employed people several winters in this work, and still goes on with hired workmen, digging into this hard rock, and blowing it up with gunpowder. A large, white-headed vulture, who once lighted on the top of this mountain, after hovering a long time above it, and looking down on the spot, he took for a messenger sent to point out the treasures. On some places are the remains of bones, and the teeth of animals,

mals, and some dead serpents were found in the clefts. These are, he says, the remains of sacrifices offered to the evil spirits, when the treasure was deposited, and thus given to them. These goblins, he pretends, play him a number of tricks, throwing stones at the workmen, and extinguishing the light brought to fire the powder, and often deceive him and his men, by calling and other means, and by this method colours his enterprize with the appearance of importance, and captivates the belief of the Siberian peasants. As he writes expeditiously, he keeps a journal of such-like hardships, of which whole quires were laid before me.

I thought it not worth my attention to inspect any part of the works of this wrong-headed fool, but sent Mr. Surjev there on this object, employing my time in botanical researches, and viewing the bitter, salt-lakes in the neighbourhood, where large quantities of salt are prepared, and the place guarded by Cossacks.

On the 28th of August, I reached the mines of Karyschkoi Rudnick, and staid some days to examine them. These were first worked by a private person. This man did not dig very deep, being contented with the day-ores, the chief of which were very irony, and not knowing how to smelt them, he was discouraged, and a barge-load of the best ore being sunk in carrying it along the river Jenisei, he gave the mine up. In 1759, Counsellor Kleopin came here, and set some

men to work, but he was tired in the course of one summer. Some noble metals, however, breaking into lazuli-pebbles, called the attention of the crown, who sent Captain Mettich, of Brunswick, and he began working it in 1764, and continued it till last year. In the several trying-pits made by this gentleman, the richest ore broke nestwise, and was usually better in the day than in the depth. It consisted of fine, violet, or lazuli-like, and also pale-green and yellow pebbles, partly sprinkled in with, and partly breaking into, compact and rich nodules, with veins of verdigris, in a wild and ferruginous matrix. At the depth of from eight to nine fathoms, this matrix prevailed so much, that the works, though continued to 10 fathoms, were so dull, that they are now suspended. Many thousand puds of ore, however, have been here dug, especially of the above-mentioned, rich pebbles, which, on an assay, yielded, in one way, in a hundred pud weight of ore, $22\frac{1}{2}$ puds of copper, and three pounds, 62 drams of silver; and in another, 20 pounds raw-stone, 15 pounds of refined copper, and nine drams of silver per pud, with many gold marks. In the depth, the meanest iron-ore yielded 15 puds of raw-iron, 20 pounds of copper, and 25 drams of silver *per cent.*

Another mine adjoining has been opened this year, and is now working. Here is a quartz lode, more than seven feet broad, which runs towards midnight.

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In it lies a brown ochre, in clefts and in nodules, and yellow mulm, with some verdigris, which, on an assay, yielded from two to three drams of silver per 100 puds. No mark of gold has appeared, and from the small quantity of silver, &c. no great things are expected.

The best mine is about 13 miles further off, up the Jurba, in the granite mountains. They work there on a quartz lode, with copper-green, one fathom strong, to which adheres a brown mulm of gold alloy. Here they extract from 100 puds two and a half to three drams of gold-dust: the vari-coloured quartz contains 23 pounds of copper, and six drams of silver; the green, mixt ochre yields 25 drams of silver, and the ferruginous ochre, two drams of silver, per 100 puds.

Between the Yjus and Jurba are many other trying-pits; but this mountain has not been so strictly examined as to give any great hopes.

An interpreter, whom I wanted for the continuation of my journey, being now arrived, I left this place on the 1st of September, taking the same road as last year, travelling straight to the south, towards the Jurba, where there are some Tartarian Jurts of the tribe Kaidan-Aimak. This tribe, and that of Arinskoi has one and the same governor, called *Baschlyk*. Part of these tribes has settled among the
Tartars,

Tartars, about the brooks Tefs and Jurba. The tribe Kaidan-Aimak reckons 30 bows, and their elder (*Kafnez*) resides upon the Uybat. The tribe Buk Tjin Aimak consists of 39 bows, whose Kafnez lives on the brook Koma. The tribe Kasan Kaidan-Aimak has but 16 bows, and dwells high in the mountains on the river Kyfir. These Tartars and the Koibuls are chiefly employed in hunting of fables in the mountains situate about these rivers and the Oi. Other Tartarian tribes may hunt there, but with the permission of these, and on certain terms.

The little, river Uybat, which empties into the Abakan, serves as a frontier-line to the Katschinzy Tartars, and those of the Sajaian mountains; the former are under the jurisdiction of Krasnajar'skaja, and the latter pay their tribute at Kusnezkoi. As the step on both sides the Uybat is not only very warm in winter, on account of the mountains, but has scarce any snow; the richest of these Tartars drive their flocks and herds here in autumn, and look on this district as their best winter-pasture. The Sajaian Tartars dwell on the right side, and the others on the left. The step, full of old graves, is an evident proof that the Nomades first settled here, and found the district an advantageous situation.

On the 4th of September I continued my journey farther on the Uybat, and directed it thro' the Sajaian
step

step towards the Little Syr. On the high fields in Dauria the *Stellaria dichotoma* was uncommonly abundant. It was now mostly dried up, in globular, round bushes, and rolled every where by the wind; for the calyxes of this plant, when dry, enclose the thick seeds, so as not to be shed; and nature has, by a particular foresight, so disposed the flower-stalks, (*pedunculi*) that they bend backwards like a leg, after it has done blossoming, that they may not break, when the plant rolls upon the ground.

About 27 miles from the Syr, lies the Russian village Synowina, inhabited by peasants; and eight miles from this is a high mountain, called by the Tartars *Temir* (Iron) which, like the Kujum, two miles further towards the brook Dshakdshul, is full of ochre-nests, in a white matrix, where the antient miners (T'schudaki) seem to have been very diligent. Many new attempts were made to work this mine, for the rest of the ochres are mostly ferruginous, and the copper and silver ore of little value. During the modern works, they discovered an adit so narrow, that a boy could scarce creep through: this narrowness must be assisted by time, which has squeezed the sides together.

Between the Nyna and Syr, we left a remarkable lake, on our right, called by the Tartars *Bulanny Kul*, who say, that in winter, it makes a certain roar before
it

it freezes. As they pass it, they leave some spray or stone upon an adjacent mountain as a sacrifice, a usual, superstitious ceremony of the Siberian pagans.

On the greater river Syr are several Tartarian jurts, where I learned they had among them a famous Kahm, or forcerer, whom the spirits had deprived of one foot, and yet he jumped well. As this man was not at home, or had, probably, concealed himself, to avoid the trouble of making his exorcisms before me, I ordered his magic dress to be brought to me; his drum was uncommonly pretty, more than an ell in diameter, and was painted green and red. Except the drum and its beater, the whole dress consisted only of a cap made of red cloth, edged with fox-skin, and ornamented with serpents' heads, having in the top a bush of owls' feathers, and about the borders were several ornaments of striped stuff, ermine-furs, &c. For in Sagai, forcerers wear their usual clothes, when performing their incantations*. They brought also, with the drum and cap of this wizzard, a bundle of 46 little sticks, of an equal size, four inches long, burnt at both ends, and, made of a species of reed, a prophetic instrument of the magicians of the place, which they call *Sugge*. When they prophesy, they take these in the left hand, sitting before a fire, mutter some words over

* See the plate Tunguse forcery.

them,

them, hold the ends of them in the fire, and with loud invocations lift them into the air, then divide them suddenly into three parcels, between the fingers of the left hand, and, by such of the sticks as do not pass between the fingers, they presage good or bad luck.

Fifteen miles further on, whilst we changed horses, we were entertained with another Sajan forcerer, called *Stepan*. He would have kept his art a secret, had not my people found out his drum, which he had concealed in another yurt. This was a brisk, young fellow, who beat his drum, first kneeling, and then sitting before the fire, and sung his incantations in a very harmonious tune. Soon after this they grew more terrible, his motions were violent, and continued more and more so, till he was seemingly in a fit; he then bent backwards, with his heels and head to the ground, making a bow of his body, beating his drum at the same time, which passed incessantly under this bow from side to side. This difficult exercise he repeated several times, and was the best part of his performance.

I rode this day, the 4th of September, to the mouth of the Akysch into the Abakan, where is an open district. A church has been built within the last year, of which the baptized, Sajan Tartars are the parishioners. Here is no building but the church, the minister's house, and that of the Baschlyk, or head of the tribe,

tribe, who has embraced the christian faith some time. The priest of this place is under the jurisdiction of Abakanskoi, tho' the tribe of Saja belongs to the district of Kusnezskoi. These christian Tartars contributed to the building the church, and the stipend of the minister, whilst those who remain pagans adhere to their pagan customs. Some of them had commenced husbandmen. Others wander, in summer - time, with their flocks and herds, along the brooks into the cool mountains, and return in winter to the snowless steps about the Abakan. The whole consists only of 150 men, who pay a tribute, or jassack, of three rubles per bow. Their complexion and constitution is not at all similar to those of the Tartars of Katschinskoi, but are more like the Beltirs, and other Tartars who inhabit the mountains of Kusnezskoi. Few of their faces are like the Kalmucks, but their features are truly Tartarian. They are very hairy about the chin and body, and their limbs and body are larger and stronger than the Katschinskians. It seems that these men, who inhabit such a wild, mountainous district, have taken care not to mix their progeny with Mongolian blood.

The most wealthy of them possess from 80 to 100 horses, as many cows, and some hundreds of sheep. Poorer ones have hardly 10 or 20 head of large cattle, which, among these step-people, are sufficient to maintain a family. Their sheep, like those of the
Tartars

5 JA 53



SATAN TARTARS HINGING ESS. RHOODENIRON & ANTI HORSE

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Published in the New York by D. J. Fowler, March 1789.

Tartars in the Jenisei, have little, fat tails, and many differ little from Russian sheep, and are seldom larger. It is peculiar to the north-east of Asia, that the long-tailed breed of sheep has generally such a fat lump. Besides agriculture, the Sajan Tartars dig also all sorts of roots and plants for food, and, like the Tunguse, search for them in the mice-holes. The following are the roots which the poor Tartars, in general scattered about the Jenisei and Kusnezkoï-mountains, collect, and almost live on, and of which they make a winter-provision.

The first is the dog's-tooth root (*Erythronium*) called here *Befs*. It is the principal business of the women to dig this root in the month of May; hence this month is called, by the Beltir and Sajan Tartars, *Befs-ai*. As these roots lie four or five inches under a tough turf, they use a particular, pointed spade for digging them. They force the spade into the ground with the foot, and the root is then easy to come at; having cleaned them, they put them in water to soak, then wind them round with bafs, and dry them. When dressed, they are boiled gently in water, till they are soft, and eaten with milk or cream. They resemble in taste the rawness of wheat-flour, mixt up with water and eggs, and are very indigestible. Another root eaten by the Katschinzkoi Tartars, is that of the common Siberian Piony. This is dried for the winter, and is mostly eaten, ground in soup with meat, and

is called *Ure*. The use of the common, and deep red bunch-lilies, the former of which, *Lilium Martagon*, is called *Sary* (yellow) *Schep*, the latter *Lilium Pomponium*, *Afchep* (white); and the Belirs call the month July, in which it is collected, *Afchep-ai*. What they do not eat raw, they keep, and eat, roasted in the cinders, like chesnuts, or boiled in water, with milk and butter. The Sajan Tartars collect a great quantity of the red lily-roots from the provision-holes of the grey step-mouse (*Mus socialis*) or else dig it with the above-mentioned spades.

They also dig roots of the sanguisorbia, the khotty fumitory, the large bell-flowers (*camp. lilifolia*), certain thistle (*carduus seratuloides*), the viper herb (*polygonum viviparum*); also a kind of herb called *sosack*, which scarce a wild boar will touch. I heard of another plant, called *uskum*, but had not an opportunity of seeing it; nay, I have been told that the poor Tartars, if very hungry, will eat the bark of the white pine-tree.

A dainty which they also dress for winter-food is the bird-cherry, which they grind, kernel and all, and eat the coarse meal in milk as a desert. It would be idle to mention all the berries they eat in summer-time. The fresh roots of hips, or wild roses, they chop and boil for tea. They make also a dish with milk and the groats of buck-wheat, which I was told they did in the following manner: after washing the grain in
water,

water, and taking off such as is light, and swims at top, which is thrown away, they put the rest into a wet bag, and let it lie 10 or 12 hours to soak, then dry it a little over an iron stove, till it becomes rather hard, which they try by the teeth; if quite dry, when pounded in their mortars, which is a hollowed trunk of a tree, it would become flour; but being a little moist, when pounded, it becomes groats; for having dried them on a stove, the husks get loose, and, in beating, come off from the body, and are cleared from the body of the grain by the hand or a winnow. The grain thus prepared, is somewhat transparent, of a yellowish colour, and is much improved in taste.

Of medicines, and other plants for domestic use, I observed the following: the *Lychnis Chalcedonica*, which grows in the vallies. The flowers of this plant are used as soap, and the Russians call it *Tatarskoi muilo* (Tartar soap). The *onofma echioides*, which grows in the steps about the Abakan, the Tartar girls use as paint for their cheeks. The savin-tree, and the *rhododendron chrysanthum*, which will be mentioned more particularly below, are medicines known for the same use among the Tartars and Russians in the Jenisei. The Tartars also dig the raphontic for internal use. The most common tea-plant here is the *saxifraga crassifolia*, and the astringent decoction of the roots is successfully used by the mountain-Tartars for looseness of the belly and feverish complaints.

Amongst the plants of some utility in the Pagan, Tartar economy, are the hemp-nettle, and little *robinea pygmaea*. Of the former they make a coarse yarn, for strings of self-shooting bows, which they set out in Autumn, and the tough roots of the latter they use as bast. They also gather the Autumn leaves of the *hemerocallis*, to make soft mats and saddle-cushions, which they twist together in a very pretty manner.

It is not that all these roots and plants are used by one and the same tribe of Tartars; but I have thrown them together, as used in general by some or other of the Tartar tribes, for any useful purposes my readers may please to try them.

On the fifth of September I continued my journey up the Abakan, more to the South, and to the most remote Russian dwellings on the Taschtyp. As soon as we cross the watry Askysch, we are in the district of the Beltirs, whose pastures are along the Abakan, and who claim the right bank of it. Six miles from this is the winter-residence of Eptisch, the present Baschlyk of the Beltir Tartars and the Birjusses.

The Beltirs consist at present of 150 tributary men, who altogether pay a Jassack of 300 rubles. Like the Saja-Tartars, they are under the jurisdiction of Kufnezkoï, and have a strong resemblance to them in countenance, manner and language. Many of them
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are rich in cattle and sheep, and most of them follow husbandry. September is their harvest-month, which, like the Germans, they call *Orgok-ai*. They thresh their corn abroad in the field, and burn the straw on the ground. Their chief crops are summer-corn (*arysch*), particularly barley (*asch*) of which they make groats. The ground is turned up with a pick-axe, called by them *abyl*; but some have begun to make use of a plough, which they call *salda*. In autumn, when they have plenty of milk, from which some neighbour or other is always distilling brandy, they are seldom to be found sober but in the morning.

The rich Beltirs have generally two or more wives, which is seldom the case among the Tartars in the Jenisei. Being substantial men, they are obstinate in their way of thinking, and could not be brought over to christianity, of course are rank heathens, and are always with their kamens or forcerers. Of all the Siberian nations, the Beltirs and the Teleutes of Kumezkoi, with some few mountaineers, are the only Tartars who do not bury their dead, but put them in coffins, and place them in trees in some remote parts of the woods. The Sajan Tartars, who are not baptized, do this less frequently: the Beltirs will not confess it; and I should, perhaps, not have found it out, if, when I was collecting the plants, I had not met with such a burying-place in a forest upon the Taschtyp, where there was placed a young woman and her mother, who died out

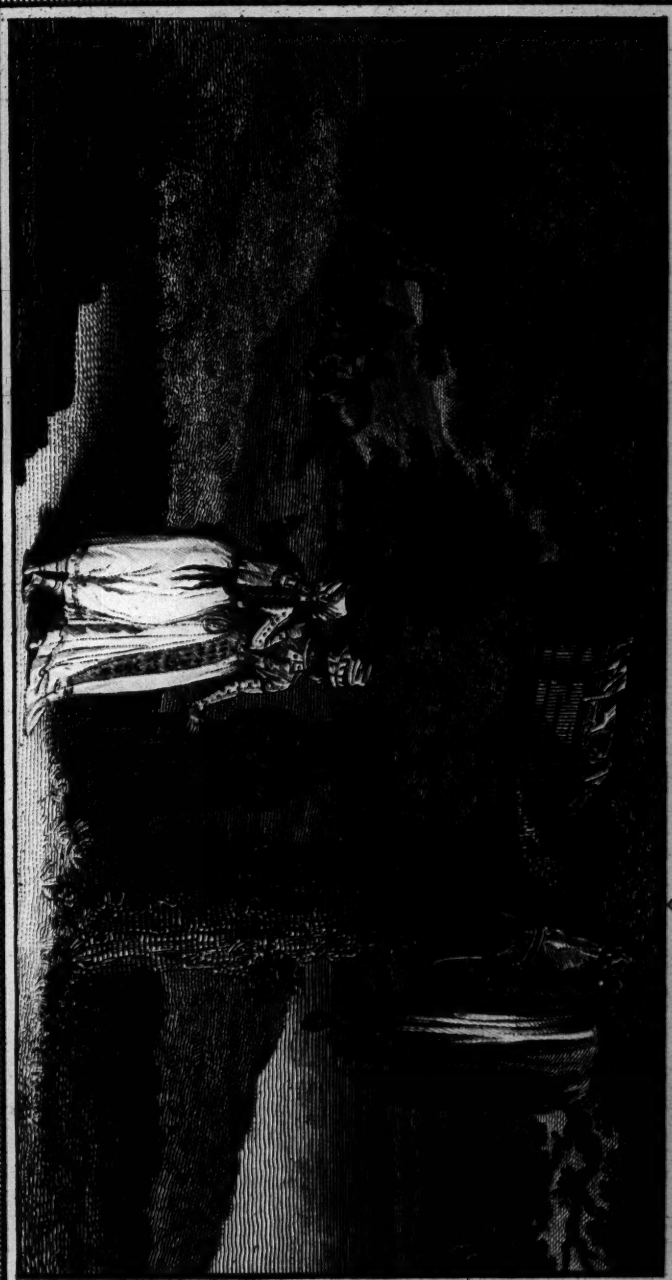
of a Beltir family that spent the winter here. The coffins were made of rough-hewn boards, tied together with ropes, and in the same manner a board was placed on the top, instead of a cover, and over it lay some birch-bark. The coffins were distant from each other about 50 fathoms, tied with ropes over two branches of two, old larch-trees, so low that a Cossack with me could easily climb and look into the coffin, though the trunk below the branches was cleared of its boughs. The body was in its full dress, and all sorts of women's cloaths lying near the head. On one side was a bag with groats, a pot with fat and remnants of dried meat, the spade with which they dig roots, a crooked knife in a case, an axe, and a horse-whip, with a saddle between her legs, that she might be ready to ride in the other world. One corpse had the head turned towards the west, and the other to the east: but this may be no certain rule. On the tree next such corpse, hung the skin of a horse, slaughtered on the occasion, with the tail and hoofs hung on a stripped branch, the head whole, bitted and bridled, on another branch. Into the coffin with a man, they put their best clothes, bow and quiver; and, if the deceased was fond of music, his three-stringed lute, *Kobys*, and his horizontal harp *jattagan*, and they sacrifice at his death, his best horse. Seven days after, among the rich, a second horse and a mare are slaughtered, and the requiem is twice or thrice a year celebrated by the relations. It is solemnized but once to the memory of a poor man, and
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A BETTER CEMETERY



5 JA 53

on that occasion they hang near the deceased, a vessel of brandy, and the bones of the victim are carefully burnt. The Beltirs however are said, in certain cases, to bury their dead, and cover the grave with stones.

Like the Katchinzkoi Tartars, the Beltirs have a custom of hanging up little rags and skins of animals about their tents. Among some I met also with the Buratian rag idols (*ongon*) consecrated by the magicians at sacrifices.

In this district up the Askysch, begins that remarkable step which extends between the mountains and the low grounds of the Abakan, and is covered more than any district on the Jenisei, with old tombs and monuments of an extraordinary size and appearance. Among these graves, which are surrounded with a square wall of granite rock and raised with the walls, partly like a flat, earth hillock, and partly paved with small granites, are many stones ornamented with a rough sculpture of human faces, deserving a more particular description, which, with other stone images on the steps of the Jenisei, have been erected long before the time of the Kirguese. A mile and an half above the winter-habitation of the Beltir chief, stood two, very narrow stones, seven feet high, flat on both sides, narrower at the top, and truncated, which now lie along upon the ground. Both have, at the upper end, the features of a human face, quite flat, cut out on them; one of which is about

half an ell higher than the other, and called, by the Tartars, *Kufs Tasch* (the daughter), and has, on the edge of the border, on the right of the face, carved figures of the two-bunched camel, from top to bottom; and, on the other edge, the ghastly image of a child.

The Beltirs call the other stone, *Kusi Tasch* (man-stone). On its right edge, below, is cut a man on horseback, with his lance before him, on which a flag hangs; and, a little higher, is carved a bent bow, with an arrow on it, tolerably large and plain. On the other edge are different figures, rendered undistinguishable by time; on the top is a lance, with a triple flag; and farther below, some square lines and the form of a boat; and, at the bottom, the figure of a child.

Some hundred fathoms from these stones, on the west side of a large tomb, encompassed with granites, and surrounded with many others, stands a piece of large granite-rock, as high as a man, so edged at the top that its point and carved side turns eastwards to the tomb. Near the point of this granite is a large female face, much more relieved than on other stones, having its mouth wide open, and very much worn and decayed by time. On the middle of the stone, on the same side, are some square lines, and elegant carved drawings, but quite insignificant. This piece of rock is known, among the heathen Tartars of this district, by the name

name of *Kurtejak-tasch* (woman's stone), or *Ulu Kurtejak* (the big woman); and is industriously invoked for good luck in fable-hunting, by the heathens that pass this way. They feed it devoutly, by smearing and filling its mouth with fat or butter.

But, a mile and an half higher up the Abakan, is the finest monument I have seen among all Siberian antiquities. This is a tomb, four fathoms high, and 150 paces in circumference, raised upon an eminence, so as to be seen at a great distance. Four other tumuli lying about, north-west and south-west, at a good distance, form a triangle with the great one; in the opening of which, westwards from the largest tumulus, at 200 paces from it, three long square-sided sand-rock stones, rather narrower at the top, are so placed, that their flat sides face the north and south, each stone standing about four feet from the other. On the northernmost of these stones, on the edge that faces the east, a very long but distinguishable face is sculptured out, and much relieved, which takes up the length of the stone. This is called, by the Tartars, *Kitfchi Kurtejak* (the little woman). Neither of the other stones have any thing remarkable, but their eastern edge being hewn like the scales of a fish. On the flat side of the stone, ornamented with the face, are some drawings. A very large stone, standing on the west of the above-mentioned grave, more than three ells high, and one and an half wide, has a great many figures on the south-side,

which, as far as I could distinguish, are a kind of Tartar hieroglyphics, as inscriptions, drawn or scratched on their tomb-stones. Some of these pieces are probably the sign-manual of the deceased; for the pagans in Siberia, like the common people in Russia, who cannot write, have a particular signature, which they use to writings instead of their name, and which is acknowledged as valid by their courts of judicature.

Among the great number of tombs of the fine winter-plains on the Abakan, there are few but what are injured: however, as I observed some not dug into, and desirous of knowing something of their internal structure, I ordered a tent to be erected near the Kurtujak Tasch, determining to pass the night here, and wait the opening of one of these hills. All the monuments about the Abakan are so similar externally, that they must have been tombs of the same nation. The only difference is, that some have the ground flat within the square walls, and others raised, which may be a distinction only of rank, or tribe. — The granite stones that border these graves lay mostly along, with one edge on the ground; none set up an end, but in the north-east, south-east, and south-west angles. Those graves which have the largest stones, are not wholly surrounded with them: some have only a long stone, like a pilaster, inclining over the grave. On those graves which lie near the mountains, there is scarce a
stone

stone to be seen, as the snow and rain from the mountains have washed the earth over them. In some, the space within the walls is divided into two or three parts, by rows of stones placed on end, and running from east to west; one of which is generally larger, and stands higher than the rest. These are apparently graves in which several persons of one family are buried. The chief difference in these tombs is, that some are paved on the top with granite-stone, and others only filled up with earth. I ordered one of the former, which seemed to be one entire hill, to be opened, but no regular coffin was found, only a mixture of decayed bones of several bodies, laid with the legs towards each other. These relics were found at the depth of four feet and a half, and in visible disorder. With the bones were found broken pieces of earthen vessels, various large cooking-basons, a bead of a greenish-white, enamelled substance; and, among the bones, a cheek-bone, with teeth of moderate size; but no other parts of the head, or other small bones, were to be found. In another grave, only filled with earth, and quite flat at top, were found, at the depth of not quite four feet and a half, some large granite-stones, lying flat, but the earth filled up beneath them; yet it was plainly to be seen, that there was a long, square space, made with stones, running east and west. Here were found the bones of a man, in such order, as to see that he was laid with his head towards the east; but of the scull and teeth nothing was remaining; and every other bone

was

was very imperfect and soft. About the head were some single horse and ox-bones ; on the right, an earthen boiling-vessel, squeezed to pieces by stones laid on it, and within it a brown dust was perceptible. On the left, the undistinguishable remains of some piece of crooked wood ; but, in the very middle, near where the head lay, a very thin round piece of leaf-gold, as big as half a ruble, bent over a raised copper button, quite rotten with verdigrease, perhaps the button of a woman's cap. The great decay of these bones, in so sandy a soil, is an indisputable proof of the high antiquity of these tombs. Though we discovered but little that was curious, yet I wished to open other tombs ; but having no good diggers, or grave-searchers, among the peasants that attended me, I was obliged to give it up.

It is said, by the Russian grave-searchers here, that the common graves contain small gold and silver vessels ; but are not so rich in other pieces of instructive antiquity as the raised earth-tombs. Indeed, I was more pleased with the antiquities found with the bodies of the first tomb we opened, than with the piece of gold in the other. Perhaps, those interred in the raised tumuli, were of that ancient nation who have left so many traces of their knowledge in metallurgy. Contented, therefore, with what I had seen, I went, on the 6th, towards the Taschtyp. At the distance of four miles, I crossed the brook Isse, and changed horses at the Kobynzian

Kobynzian jurts, on the brook Tye. Here I met the elders of three Tartarean tribes, Kobyn, Kargin, and Kain, who are under the jurisdiction of Kunezkoi, and who, like the Beltirs, received me with great affability. The tribe Kobyn consists of 53 bows; that of Kargin, of 40; which last, with some other tribes of mountaineers, bear the common name of *Birjasses*. The former once inhabited the mountains, and lived wretchedly on hunting; but since they have settled on the Tye and Abakan, in the territories of the Beltirs, they are grown rather substantial, by adding the breeding of cattle to their employ of hunting. In their language, make, manners, and way of living, they do not differ from the Beltirs; and live, like all the Tartars about the Jenifei, in jurts, covered in summer with birch bark, and in winter with sheep-wool felts.

There was here, in the southern parts of the more open mountains, an incredible number of partridges, who, in winter, find abundance of food in the warm and snowless meridional parts of the rocky mountains, and who run about in crowds very tame, and not the least shy.

Taschtypkaja is the most remote Russian village on the waste part of the Mongolian frontiers, which, from the Ob to the Jenifei, is not yet provided with fortresses and regular troops. It is situated at the bottom of the high mountains, where woods begin to cover their

their tops. On the left of the Taschtyp are five dwellings, inhabited by Cossacks from Krasnojarskaja, who voluntarily offered to do the frontier-duty, which used to be done by Tartars. This people have found the place excellently adapted for agriculture, breeding of cattle, and hunting. Sometimes the corn suffers by early, white frosts, and sometimes by caterpillars; but, on the whole, the harvest is usually a good one. For breeding of cattle, they have the finest meadows; and it is a rich place for hunting. There are indeed but few fables; but these they can procure from the poor Tartars, by giving them bread and groats in exchange. In fact, this district well deserves numerous population. The Taschtyp is a large brook which, in spring and rainy weather, flows so plentifully, that, on the shallowest spots, it is scarcely fordable by horses. It flows here between two, high, chalk mountains, which extend further up and down the Abakan, are from hence covered with larch-trees and fir-woods, intersected with fine, open vallies. From the village, to its mouth in the Abakan, it is about 22 miles. On the other side of the frontier, which is Chinese Mongolia, no Mongols live, but a people called *Sojet*, that subsist on hunting, keep rein-deer, and, in language and blood, seem related to the Motores, on the Oi and Tuba, and of course to the Koibales and Samojedes. Before the Chinese had any guards on their frontiers, there was always here a road of communication between Siberia and Mongolia.

Befide^s

Besides the frontier-mark of this place, there is another eastwards, on the Jenisei, at the mouth of the Kenitschuk, into that river; but there is no getting to it, except over the ice, in winter.

About the Taschtyp are Tartars of the tribes of Kain and Kobyn. The former has but 25 military men; but the tribe Schors, further down the Masna, has 50. As these have no opportunity for agriculture, and are poor in cattle, their subsistence consists in wild roots and hunting, living in wildernesses inaccessible to others, and being rank heathens. In winter they wander, with their little cattle, down the Taschtyp, where the snow does not fall too deep. The fables being scarce in this district, they go to the wild morasses, on the opposite shore of the Jenisei, in the district of Krasnojarskaja, to catch this animal, in order to pay their tribute. But the Koibales, who pretend to claim that district, will not suffer them to hunt with nets, but often take their instruments and toils from them.

I continued at Taschtyp on the 7th of September, and spent the whole day in climbing the mountains along the brook, in search of plants. Underneath a steep rock, after having had the good luck to climb up, a young bear, by the rattling of a falling stone, was moved from his abode, took flight, and as we, by hallooing and shouting, frightened him still more, he swam through the Taschtyp, in order to hide himself in an adjacent

adjacent wood. I sent a Tartar, with this intelligence, to the next jurts; and, in less than half an hour, a number of armed Tartars, on horseback, hastened on all sides, pursuing the bear close through an open field, over which he wanted to take refuge in a distant mountain. They killed him in this field, and we had the pleasure of surveying the chace from the high mountain; and were much astonished at the courage of a Tartarean horse, which overtook the bear first, and beat him down on the rocky ground with his fore-feet, previous to his being killed.

The plants here are common to the districts of Dauria, and the mountains in the east of Siberia. On the chalky mountains grows, in many places, the savin-tree (*Juniperus Sabina*). This tree is occasionally conveyed to Krasnojarskaja and Tomskoi, as a famous, domestic remedy; the knowledge of which seems to have originated from the Tartars; and the name they give it, *Artschin*, the Russians have adopted. They use its branches, not only superstitiously to smoke off malicious spirits, but the same is also serviceable to sick children; and, in disorders of the head, to grown people: and, if the smoke will not operate with efficacy, they swallow some of it. It is also said to be of great service for various disorders of the belly.

But a more valuable plant still in all Chinese disorders, is a fine species of snow-rose (described fully
in

A BEAR CHASE



Wheaton Delmon

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in Flor. Sibir. vol. iv. page 121, Tab. 54), which grows here on low bushes; as also on the lofty Alps, and in Dauria; with sulphur-yellow flower-bunches (*Rhododendron Chrysanthum*), and hard and thick leaves, like those of lauro crasus. This rare plant likes the rocky mossy caps of the snow-mountains in Dauria, where it is called, by the common people, *Tschernogrif* and *Kelarsk*, and has been taken notice of by Mr. *Sokolof*, on the bare summits of the partition-mountains, situated between the sources of the Kirkun and Tschikoi. It is gathered here on two lofty mountains on the Jenisei, where it grows; and also, abundantly, about the roads and paths that lead to the frontier-marks, by the Cossack soldiers, who carry it home to their wives and relations, as a fine medicine. The Tartars call it *Schu*, drinking only its leaves boiled in water, in moderate quantities, as a wholesome tea. This tea, however, has no very sensible operation, or efficacy, unless made too strong, when it attacks the head. But if some of its small branches, with their leaves, are put into a glazed pan, covered close down, and suffered to boil with water over a stove; it makes a strong, bitter and brown liquor, which, if taken internally, throws the patient into a feverish, drunken-like state of insensibility; during which, the internal parts, or limbs affected, are in an incessant motion. This intoxication quits the patient sooner than that of spirituous liquors, and leaves no head-ach, nor the least indisposition; and commonly, after once or twice taking, cures the disorder, or affected part.

part. The heat, excited by it, makes the patient very thirsty, and if he drinks any cold water, will be attended with violent vomiting; but this vomiting is salutary, and particularly serviceable in all complaints of the belly. The Cossacks use it in all rheumatic cases, and chronic pains in the limbs, which it is said to cure infallibly, by a violent and continual twitching in those limbs. It is also said to mitigate pains in the limbs, arising from, that scourge of mankind, the venereal disease; and I saw living instances, in Dauria, where it cured this disorder: however, this plant must certainly be classed among the specific, strong, vegetable remedies; and might, by care, and proper management of able physicians, become an excellent application in all podagrical, arthritic complaints, and internal, chronic obstructions of the bowels; and deserves, therefore, every experiment to be made of it. The above-mentioned effects I wrote down, not only on the universal report of numbers of common people, who had experienced its virtues, but even on the assertion of Mr. *Sokolof*, who used it with success on his return from Dauria, when he was rendered quite weak and ill by an obstructed diarrhoea. I must also add, that the Cossacks generally culled this plant in autumn, when it is in seed, and many of its leaves are become yellow. How much more efficacious, therefore, must it be, if gathered earlier, whilst in bloom! It blossoms in the beginning of July, and soon loses its beauty, like all mountain-plants. It has been remarked, that stags, and
the

the Siberian muscus, devour its leaves, without any intoxicating effects. I found some in the stomach of the former. Probably this plant, like the *Kalmia* of North-America, may be detrimental to the stag, but not to other domestic animals.

The river Abakan, where we crossed, is more than 80 fathoms broad, very deep, as rapid as an arrow, and difficult to pass; however, having prepared a ferry, we effected it; and in my way to Sajanskoi-Ostrog, a distance of 82 miles, I passed the night of the 9th of September in the jurts of the Koibales, about four miles from the Jenisei, and eight from Sajanskoi-Ostrog.

The Koibales, with whom I got acquainted this day, are a very different set of people from all the pagan Tartars hitherto mentioned; not in their persons, manner of living, and dress, but in appearance and language, and, of course, in origin. Their language is much like that of the Samojedes; and, though rendered confused by a strong mixture of Tartar, yet it may probably be concluded, from the considerable remains of the former language among the Koibal hordes, Motores, &c. that this, and other scattered tribes, must be a remnant of the Samojede nations, driven from their ancient abodes, as far as the Dolar countries. The following list of words is a sufficient proof of the resemblance of the languages of those na-

tions; and that of the Motores seems to be most like the Samojede.

<i>Words.</i>	<i>Samojede.</i>	<i>Koibalian.</i>	<i>Motore.</i>	<i>Karagassian.</i>
<i>God,</i>	Chai,	Chudai,	Burkan,	Tere.
<i>Heaven,</i>	Num,	Num,	Orchochairachan,	Tere.
<i>Devil,</i>	Sjudybe,	- - - -	Staala,	Sedkyr.
<i>Clouds,</i>	Tir,	Kinsiga,	Ti,	Di.
<i>Snow,</i>	Syra,	Sirra,	Sirra,	Sira.
<i>Hail,</i>	Sirobta,	Tuskunak,	Tusjunak,	Siril.
<i>Rain,</i>	Sarju,	Suruno,	Sirru,	Sjuru.
<i>Wind,</i>	Mirtfchen,	Warffe,	Mirga,	Merge.
<i>Fire,</i>	Tu,	Sy,	Tui,	Dui.
<i>Water,</i>	Uib,	Bu,	Bun,	Bu.
<i>Earth,</i>	Ja,	Dshu,	Dsha,	Dsha.
<i>Mountain,</i>	Tanaba,	Muija,	Bia,	Bia.
<i>Stone,</i>	Pai,	Pi,	Hila,	Tangait.
<i>Tree,</i>	Pa,	Pa,	Hah,	Chy.
<i>Head,</i>	Aiba,	Ulu,	Nhamba,	Aibada.
<i>Eye,</i>	Saiwy,	Sima,	Ssima,	Sjimida.
<i>Fur,</i>	Pany,	Purga,	- - - - -	Charga.
<i>Fur,</i>	Mat,	Mat,	Mat,	Ottok.
<i>Fish,</i>	Chale,	Cholla,	Ghalla,	Kale.

Of the Koibales, round the Jenisei, they reckon 14 tribes, all which contain only 384 men who pay tribute. They are almost all baptized, and have laid their pagan customs aside, at least publicly. Aged and full-grown people they bury in the ground; but children, when dead, they expose on trees, as do the Beltirs. They are not very opulent in cattle, but live tolerably well by hunting and agriculture; yet some of them

them will possess a hundred horses: they use the Russian plough *Saban*; sow more grain than they want, and sell the overplus to the Tartars. They gather also more wild-flax and nettles than the Tartars, and make ropes of them. Many have wooden, winter-dwellings; and even those who wander about in tents, keep poultry. They hunt in large companies, and kill a great many fables, beavers and otters, which they claim an exclusive right to: their first hunting-season is at the end of August. In December and January they catch fables, beavers, otters, lynxes, and other scarce and dear animals; but in March they hunt elks and stags in their snow-scates. Their furs are mostly conveyed by commission to Kufnezkoï; but they pay their tribute in the hides of elks and stags, and make up any deficiency in money. They catch the hyena in the following manner. This animal is said to follow the track of foxes, in order to share their prey; they, therefore, fix traps and self-shooting bows about such tracks, to which the hyena falls a victim first. When the Koibales are hunting in the winter-time, on the mountainous wildnernesses, where their horses cannot feed on account of the deep snow, they search for those stores of hay, laid up, in considerable heaps, under the rocks, or about the trees, by the little cliff-hare (*lepus alpinus*). These heaps consist of the most juicy plants, and, among the rest, a great deal of wolf's-bane; but it does not hurt the horses. About these heaps are many deep paths,

in which these little, industrious animals run up and down.

There are but few, old customs remaining among the Koibales. Their women wear tresses, hanging to the shoulders; and caps like those of the Mongols. They are delivered of their children kneeling, and supported by some man, but a female friend performs the office of the midwife. The lying-in woman is fed with a great deal of butter and fat meat, and is not suffered to drink any thing cold for the first three days, at the expiration of which time she returns to her business; but during her state of impurity, which is eleven days, or a fortnight, she must not dress any victuals for her husband. In the first seven days she is washed thrice; and, after this, once a month for some time; but her last purification is being smoked with the Irwen, which is the Sabin of Linnæus.

I will say a few words here of the Motores in particular. There are scarce 10 families of them, the small-pox having twice raged among them. Formerly there were about 30, who paid tribute, and these resided about the mountains beyond Sajanskoi-Ostrog, till they were removed from the frontiers towards Abakanskoi, and beyond the Tuba. Their dress and cloaths still differ from the Koibales. They are poor, possess but little cattle, and live chiefly by hunting, and serving the Russians. The few there are, were
baptized

baptized about 30 years ago, and formerly placed their dead, between three boards, upon trees. To keep their tents warm, they cover them in winter with hay, at other times with birch-bark. Their doors are made in the east side, and they either cannot or will not remember their former superstitions.

Here is a mine also in this neighbourhood, that contains silver, but these works are at present suspended. On the 11th of September, having prepared every thing for crossing the Jenisei, which is here only 200 fathoms wide, we got our waggons over, but with difficulty.

In the village where we slept, I met with an old peasant, who was not a searcher of ore, but an experienced digger of hidden treasures. He made no secret of his art; and to him and his assistants am I indebted for several good accounts of the nature of the ancient tombs on the Jenisei, and am therefore less scrupulous of committing them to paper, convinced, by viewing fresh-opened tombs, of the truth of what he told me.

The ancient tombs, he said, might be divided into two kinds; the first of which consisted of tombs of stone, the other of earth-hills, surrounded with stone. In stone-graves bodies are often found, described as above; their head to the east, in a sepulchre, or case,

made of stones. The bones of the head are chiefly mouldered into dust. On the right side of the head are generally found large, earthen basins, and relics of common, wooden household-furniture. In the principal graves of this kind, which differed not externally from the rest, except in the size of the stones made use of, have been found elegant, silver vessels, gold plates, buttons, and other ornaments; horse-furniture, made of iron, inlaid or plated with gold and silver, and sometimes, though very rare, copper-furniture. Sometimes the bones of burnt bodies have been found in a little space cased with stone.

The large grave-hills, made of earth only, are still more remarkable, and seem to belong to a very different nation. These are in districts separate from those where the stone-tombs are, raised on certain heights and level ground, as numerous and close together as in a church-yard. In these are found plain and complete timber-work, large, but decayed. Hence it appears that the bodies in these graves were laid in a place lined with thick beams, laid upon each other, something like the house of a Russian peasant; and the whole apparently covered with birch-bark, and other wood, which broke in the cover of the sepulchre by its weight. In these places have been found the bones of two or three bodies; and at the feet several, little toys, interred with the corpse; earth and copper vessels, remnants of wooden vessels and ladles;
copper

copper tools of all sorts, daggers and knives; with traces of scabbards, and other small instruments. About the head are found buttons, buckles, plated with gold, and other appearances of dress. Occasionally, in the best-preserved tombs, have been found visible pieces of gold and silk stuff, and remains of fable-hair. In some were found bones of large and small animals; and several little, angular pyramids of various figures, in cast-copper, representing chessmen, or something similar. Remains of lances, and staves of honour are also met with, where men have been buried; and crutches of cast copper, sometimes wreathed with stripes of hammered-gold. Nay, sometimes, solid plates of gold have been found, probably the ornaments of the neck or arms; girdles, and the handles of daggers, decorated with gold. In other sepulchres, besides whole bodies, are some burnt, whose bones lie in a heap together, commonly near the sides of the tomb; and in such heaps of ashes often lie small plates of gold, and other little things. In other graves again are seen things, whose use or meaning cannot be devised. An old digger of these graves, however, assured me he once found a man's head, made hollow, of fine porcelain-earth, almost as large as life, painted with green and red leaves; and another once found a duck, carved in the bark of aspen, and thinly covered with gold. Another made me a present of a wild sheep, cast in copper, standing on a round pedestal, the produce of such a grave. They have also found many buttons, formed like bells, on

which the figure of a chamois was engraved, as I have mentioned once before. Every thing in copper was cast. Some traces of iron have been found. One of these men said, he once met with a rusty piece of an axe in iron, but such metal is very rare.

They are of opinion that most of these tombs have been opened and plundered long since, as the bones are often seen lying in the greatest confusion, and in these graves nothing of any value is found. In large tombs are skeletons of horses, with remnants of saddles, and other horse-furniture, without the wooden case, but beneath the earth. The human bones found are generally of the common size; yet they assured me they have found gigantic ones.

In the district about the Schusch, and other places, especially east of the Jenisei, are graves, containing a great quantity of confused bones, rare lances, and the copper points of arrows; evident proofs of battles.

Four miles up the Schuner, on the Jenisei, lies Sajanaskoi Ostrog. It is a fortress, 50 fathoms' square, the walls timber, with towers in the angles, and two gates, encompassed with a ditch, and chevaux-de-frize. Within are five caserns, a provision storehouse, a powder-magazine, and six cannon: the garrison consists of seven cossacks and a corporal. As the rocky soil of this place will not admit of husbandry,

bandry, the houses of these men are in the adjacent villages, and two men only, at a time, mount guard here, to take care of the powder and cannon; so that the place looks empty, though the buildings are in a good state.

I made an attempt to go further up the Jenisei, by leaving my light-waggon, and going on horseback, but could get no farther than about seven miles, to the fortress Omai-Tura, which lies in a very rocky corner, close to the river, under the mountains that join the Jenisei, and stop all further passage by land. This place is called by the Tartars *Logina Osida* (the siege of Login); but why, no one can tell. Before the Russian settlement, a Kirguese Horde is said to have taken refuge here in winter, to be free from their persecutors, till they went on further, in spring, in the mountains of Mongolia. When the trying-pits on the Oi were worked, here was a passage on the river for the workmen, the mouth of the Oi being just opposite this spot.

In my way, I saw an innumerable quantity of partridges and quails; the adjacent mountains are crowded with them. These birds spent the winter here, underneath the snow. The cause that prevents their wandering to warmer, southern climes is, the high mountains, which are much sooner covered with snow; and which, as the autumn drives them here from
the

the low-lands, blocks up their passage southwards into Europe.

On the night of the 13th, rose a violent storm from south-west, which continued next day, and then changed to north-west, and caused a great frost. However, I continued my journey, early in the morning, down the Jenisei, towards Krasnojarskaja; and at the distance of 23 miles from where I set out, my two waggons were passed over the Oi, which is here 60 fathoms wide, but not without danger, as the storm continued. The village Ustoiszkaja, on both sides, lies not far from its mouth into the Jenisei. Besides the peasants of the place, Cossacks here reside, who do the frontier-duty. Hence we are naturally led 58 miles up the Oi to Oi-Kebesch Karaul, which lies on the very spot where the Oi and Kebesch unite, and which is the middle, and most remote frontier-post. The next post is 39 miles further up the Oi, and is distant from Abakanskaja 145 miles. The post next following is 21 miles; but the distance from that to the first frontier-guard of Winskoi, on account of the wildness of the mountains, is not known. The frontier-marks are visited by three guard-stations, each of which has garrisons, and are distant from Oi-Kebesch-Karaul 83 miles. From the guard-post, last-mentioned, the line runs up the Kebesch, over a high mountain, to the brook Taradanu; and then down the brook, along the mountain-track Ufimarga, to the river Us, from whose borders the
snow-

ſnow-mountain Choin-Taban riſes ſteeply to the ſkies: hence the boundary runs eaſt, over the Us; ſo that the loftieſt mountains about its ſource, which run along the north-eaſt arm of the Jeniſei, giving the Selenga its ſources, belong to Mongalia. This mountainous diſtrict is ſo wild and dangerous, that it cannot be ridden over in the beſt of ſeaſons. We were obliged to travel on foot, driving our horſes before us, not to run the riſk of falling every moment down the rocks.

Being aſſured that on the high rocks, about the Us, were many of theſe large Chamoifes, called by the Tartars of this place *Toghe*, and by the Mongols *Takja*, which are not now found farther within Siberia; I had obtained orders for the Tartars of Udinskoi to endeavour to catch me one in the month of January, 1773; but I was lucky enough to receive two frozen ones from Udinskoi before I left Siberia. They had been killed between the Uda and Birjuſſa by ſome Karagaſſians. The one was very old, and had loſt his left horn, probably by a fall; and the other was a young, but full-grown animal. The Mountain-Tartars call the buck *Toghe*, the ſhe-goat *Hima*, and the young ones *Bitſchinja*. The ſize of the Siberian Chamois is the ſame in proportion to the Helvetian one, as the Siberian ſtone-ram, or Argali, is to the Muſſon of Corſica. His colour may be compared with the Cabrit of Guinea, and ſome deer-like Kirguiſian ſhe-goats. The young buck was more
light.

light-coloured, and less black than the old one. The general colour is a light-brown grey. On the body the hair is not much longer than that of the stag, but more like goat's-hair. The fore-part of the belly is long-haired, and so is the neck, hind-part of the head and forehead. The longest hair, which is rather above four inches, is on the breast. It has a short, deer's-tail, black above, and white on the sides. A stripe along the breast, shoulders, thighs, and fore-feet, and a spot between the eyes. The beard, which was about six inches long in the old Chamois, was all black; but the young one had only some black spots on the feet, the joints of the fore-legs; and the beard, the breast, belly, and feet were otherwise white. The horns were bent, in form of a scythe, very strongly pressed together sideways; shorter about the upper edge, and strongly knotted; or else flat, wrinkled, and striped. The left-horn of the old one was four inches long, and had 13 knots. The feet of this animal are uncommonly strong and solid, and the shoulders much more fleshy than the thighs, owing to the animal's leaping on its fore-feet, when it jumps from rock to rock. Betwixt the hair the Chamois has a rich, grey fleece all over the back and neck, exactly like that of the tame-goat.

I shall say nothing of the old smelting-furnaces and bing-places met with here, and about the Tuba, but now deserted, under the pretence of ore being scarce,
Mr.

Mr. Gmelin having mentioned and described them in his tour. All I shall observe is, that there was found near these bing-places an old, iron plough-share, of a peculiar form.

My road led me over the mountain Kuna, where the way down on the north side is steep. On the back of this mountain are two tombs, or heaps of stones, one near the other, to which every Tartar, who passes this way, adds one, or throws a bush. These tombs are said to have been made when the Kirguese inhabited this district. The common story, among the Tartars, is that a rich Kirguese Bey had two fine wives, so jealous, that he was obliged to have two jurts for them, one on each side of the mountain, and that he lived on each side himself by turns; but it unfortunately happened that these two met together, when changing of pastures, fought, and killed each other, and are buried under these heaps of stones.

Near this place are some Tartarian jurts, where I remained all night, but could not sleep, owing to a Kufnez of the Aimak of Tubinskoi, remarkable for having a large spot on his head, overgrown with white hair, which grew so, after a fore he had in his head was healed. These white spots are always the effect of fores. Some Jakutian and Tschulym Tartars are born so. This man was perfect master of the lute, and a real Troubadour in telling and singing tales, which,
accord-

according to their interpretation, were similar to those of Ariosto. He sung each stanza first to the lute, and then repeated it in a droll, declaiming tone. The harmony of the voices of the Katschinzy Tartars is much like that of the Kalmucks, and delightful in the open air. Their young people spend whole evenings in singing to the lute, not songs, but some strange, insignificant notes; for example, *Oido-ido, ti-dum-dido*, and with great enthusiasm.

Katschinzian Tartars.—I shall here add some observations on these Tartars, to complete what has been said of them in the preceding year. The remark I made of their beardless, Mongol faces, was now more confirmed; and herein is this horde distinguished from all other Siberian Tartars. Being very rich in cattle, they neither profess agriculture nor christianity. Yet they sow a little Siberian buck-wheat and barley, to make groats. Like the Mongols, they are satisfied with one wife; often court for three, four, or five years; on which account parents suffer their children to be courted early: but some have already abolished the Kalym, or marriage-price; and those who do receive any thing for their daughters, get it by instalments. The suitor is never suffered to be alone with the bride, before the nuptials have been celebrated; as it would be highly disgraceful to the lady to have any prior intimacy with her intended husband. This, however, is quite contrary to the custom of the Mon-
gols

gols and Kalmucks. The first nuptial-feast is given by the bride's father; the next by the bridegroom; and for their second feast the bridegroom's father erects a jurt for the young couple; but the household-furniture, and garments of the bride are provided by her father. After the first courtship, the father-in-law never sees his son's wife again, nor does he enter his son's jurt; and should the father-in-law meet her by chance, custom enjoins her to throw herself prostrate on her face, till her father-in-law passes, which he does with the utmost precipitation. The mother-in-law and the bride's father may have free access to the young couple's tent when they please. The bride is often richly presented with cattle on her marriage, by her parents; and should her husband grow tired of her, and send her home, after an interval of some years, he only returns the number of cattle she brought with her. All the children, and the increase of her flocks and herds, are his own. This blameable custom induces many to court rich girls, merely to enjoy the produce of her fortune; and, after several years cohabitation, the unhappy female is repudiated. Should she wish for a divorce on her own account, without having had a son, she has no return; and her parents are liable to refund the husband's kalym. Both parties are at liberty to marry again after such a divorce. Daughters are made equal in patrimony to their brothers; and, where there is no brother, the father can give, verbally, his whole property to his daughter. Women do not cohabit
with

with their husbands after delivery for one whole month; and during the continuance of their impurity, which is at least 10 days, she is not suffered to do any domestic business. At the time of her delivery many women of the neighbourhood assemble at her jurt, but her father does not leave it. The child receives either the name of the first stranger that comes into the jurt after its birth, or the father gives it one himself; and hence many pagan Tartars have Russian names.

The chief festival celebrated both by the Katschinzi Tartars, and other heathens of that nation, is the feast of spring (*Tun*) when they begin to milk their mares. This feast is not celebrated by all at one time, but by degrees, one family after another, through the whole neighbourhood. It consists in tippling, and the host preserves his milk for three days, to distill a sufficient quantity of brandy or spirit. After the first feast, several neighbouring tribes meet together, go up on a hill, and there perform a solemn sacrifice, with prayers (*Chudaiga Basheraga*) directed towards the east. At other times, as in cases of sickness and necessity, they offer to their *Tus*, or house-god, called also *Aima*, little animals, skins, flesh, &c. At their public sacrifices a Kham, or forcerer, must be present, who consecrates a horse, which they call *Yfik*, and which, according to the injunctions of the Schamans, must be either a grey, fox-coloured, or black gelding. Such a consecration is only performed when a magician thinks proper to bless the flocks of his countrymen.

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This Yfik, or consecrated horse, is washed, every spring, during the feast of the Tun, with milk and boiled wormwood (*Irwen*); and also incensed with that herb, decorated with red and white rags about his mane and tail, and then turned loose. The owner durst not ride him, unless some snow has fallen, then he is obliged to saddle him; and, when the snow disappears, to turn him loose again. When the animal is too old to ride, the owner may sell him, and get a young one consecrated as his successor. If its owner dies, the sacred horse is not slaughtered, but becomes the property of his heirs.

The Katschinzi Tartars are great cooks, and dress their food in the French fashion. At present, they have two magicians of their own, but formerly were obliged to borrow those of the Tomskoi Tartars of Kyfil Aïmak, residing near the black Yjus. I saw the dress of a Katschinzian sorcerer, at Karysch, which had been made many years before he entered the holy profession; or, at least, before he wished to pass for a sorcerer. His dress, as a beginner, was but moderate; he jobbed about without a cap, with parti-coloured, leather stockings, and, on his body, a narrow, dirty, great coat, of printed callico; over his shoulders, he wore a red piece of cloth, like a collar, from which 13 ribbands (*Syfin*) hung down, of various colours, green, yellow, red, blue and black, sewed together; and various coloured silk and cotton rags, some worked through with

mock gold, so as that no one was like the other. Instead of the magic drum, he held a piece of wood in one hand, round in the middle, flat at both ends, like an oar, and ornamented with a little bell, on which he tinkled very briskly, striking it alternately on each side with a wooden beater. Many other sorcerers use the same magic instrument, saying, they are obliged so to do, till their Spirits will suffer them to beat a drum; but the truth is, they cannot afford to purchase one, and wait for the slaughter of some, good horse, whose skin they can get to make one; for such a sacrifice is requisite, to furnish them with a drum.

Of late years, a kind of rage has unhappily seized many girls, at the time their menses first makes its appearance, and continues for several years. It is so violent, that they often run out of their tents, make frightful faces, pluck out their hair, and would either hang, or kill themselves, if they were not prevented. These fits last but a few hours; but they have an irregular relapse, weekly or monthly. I saw such girls, between the fits, very rational and well-disposed.

The venereal disease is also become common of late years, and breaks out at first in boils, on the head, body and groin. The Tartars call it, *Kotur*.

The small-pox (*Tschetschiak*) is here only occasionally, sometimes not heard of for many years; but when
once

once it prevails, makes great ravage, especially among children and young people ; when a fear of catching it, a bad attendance therein, the uncleanness of the diet and abode, and impurity of the blood, seldom fail to carry the patient off. It raged here about 10 years since.

The Katschinzy Tartars occupy the finest district of the regency of Krasnojarskaja, which is all the land between the White Yjus and the Jenisei, to the Uybat and Abakan. They are divided into six aimaks ; each has a presiding kufnez, confirmed by the regency of Krasnojarskaja, who collects the tribute, decides little causes, and maintains good order ; but he has no salary, and pays his head-money equally with the lowest of the tribe. They amount to 1155 tributary heads, or families, and pay annually a Jassak of 2196 rubles. In this district are also settled four other hordes of Tartars, amounting to 222.

They live, like all substantial Tartars on the Jenisei, in felt-tents, in winter only, which they stow away in summer in cavities of rocks, known only to themselves, in order to preserve them dry, to cover their jurts again the next autumn. For this purpose, they collect birch-bark, about the end of June, a season when it is in the best state to keep out wet. By boiling, they clear it of all gumminess, preserving only the resinous parts, which renders it smooth, and not liable to rot.

Hence the month of June is called *Toos-ai* (birch-month).

I observed, among these Tartars and Beltirs, a particular manner of making milk-brandy, different from that of the Tunguse, and the Mongol Kalmucks; yet more like the Tunguse brandy, or spirit, and better than both. The still which they use is different; and they put a sheep's head into the milk, which, after distillation, is boiled, with small, minced meat, as a soup, and which they greedily devour as a great dainty. They also pour milk into the curds, which they will sometimes eat fresh, and sometimes dry, in pieces, called *Bischbro*; and take it with them as a provision, when they go a hunting.

On the 16th I crossed the brook Koksa, and rode down the Jenisei, along the limits above-mentioned, to the place where we cross for the Abakan. Here I copied some of the inscriptions already spoken of, that were most preserved. Three of them I laid before Major *Wolassof*, a gentleman of great erudition, and versed in antiquities, who was commissioned on frontier-business at Selenginskaja; but the interpreters of this place could not make them out, not being written in Mongol, or Manshurian language; but with an ancient, current character, used by some Chinese.

I had

I had now 38 miles to Karyshkoi-Rudnik, where Mr. *Surjef* waited for me, having acquitted himself of the charge I had entrusted him with, that of inspecting some bitter salt-lakes on the Abakan.

The autumnal season, which every day grew more cold and bad, determined me to go back to Krasnojarskaja, where I had enough to employ me. I returned, therefore, on the 18th, and arrived there on the 23d, by the same road I passed last year. In order to return from Siberia, I was obliged to wait for the sledge-season, and the arrival of Mr. *Georgi*, and some gentlemen students I had left behind me in Dauria.

At Krasnojarskaja, on the opposite shore of the Jenisei, they often find elephant bones; and I took up, myself, a grinder of this animal, from under a high sand-bank, a mile or two from the town; but could find no mark, or traces of marine bodies, south of this place, to the Sajanian mountains.

“ Professor Pallas has frequently spoken of some
“ great change in the earth, evident from the number
“ of such bones found, and the marine substances, so
“ frequently met with in the low lands of Siberia. It
“ will be rather interrupting his narrative, but I per-
“ suade myself it must be gratifying to every philo-
“ sophic reader, to know his opinion on this subject.
“ Buffon, and others, have thought that mountains owe

“ their origin to convulsive motions of the earth, being
“ thrown up by subterraneous fires. Pallas was of the
“ same way of thinking, till he traversed the extensive
“ wilds of Siberia and Tartary. But, on a minute ex-
“ amination of the contents of these mountains, and
“ those of the plains below them, he is now convinced
“ that the hypothesis is an erroneous one. These moun-
“ tains are a continued chain of solid, granite rock,
“ extending over a vast continent, from sea to sea ;
“ not found in layers, but in blocks and lumps, or at
“ least in masses, heaped one upon another ; not dis-
“ covering the smallest trace of petrifications, or organic
“ impression ; of course, it appears to have been
“ formed prior to all organized nature. The highest
“ eminences these rocky mountains form, whether in
“ ridges, or sharp pikes, do not seem to have been co-
“ vered again by clayey, or calcareous layers, originally
“ from the sea, but to have been there from the earliest
“ periods of time, or ever since they obtained their
“ elevated and landed situation, above the level of
“ the seas ; of course, we are to suppose, that this
“ granite substance, which forms these mountains, and
“ is also the core of the vastest Alps of the known
“ world, is the principal materials, or substance, of the
“ interior of our globe.

“ Leaving these chains of mountains, we perceive
“ the calcareous beds rapidly tending to the plain, tak-
“ ing a horizontal position, and becoming abundant in
“ all

“ all manner of shells, madrepora, and other spoils of
“ the ocean. The same are met in the lowest vallies at
“ the foot of the mountains ; the whole extent like-
“ wise of Great Russia is filled with them, appearing
“ no less on the hills, than in the flat countries ; some-
“ times solid, as if sown with marine productions ; at
“ others, altogether composed of shells, and broken
“ madrepora, and that calcareous gravel always found
“ in those latitudes where the sea abounds with such
“ productions.

“ As soon as, from the marshes of Ingria, which form,
“ towards the Baltic, a sort of gulph, in low lands, we
“ begin to ascend the elevated soil of Russia, whose
“ declivity makes what is commonly called the moun-
“ tains of Valdais, and continually meet with ancient
“ traces of the sea, over a country which has visibly
“ suffered from an inundation of the greatest violence ;
“ these are terrene layers of a depositum, strewn with
“ blocks of granite, broke from their original rocks,
“ vast banks of rolled flints and gravel, mixed with
“ petrifications, and even the bones of animals. A similar
“ inundation may be traced, as far as the lake Onega,
“ where the mountains, from the Lapland and Swe-
“ dish Alps, begin to rise. It is sufficient to cast the
“ eye over the map, to see, in the great number of
“ lakes, between the gulph of Finland and the White-
“ Sea, in the isles, the rocks and the broken shores of
“ these latitudes, the effect of a deluge, which has run

“ that way; of course, it may be concluded, that the
“ Baltic and White-Seas, those great breaches of
“ the continent, have been excavated by the same
“ violence.

“ Hence it follows, that all those vast plains of the
“ Russian empire, were formerly the bottom of the
“ ocean; and that the elevated grounds, and high
“ chains of mountains, have always been islands and
“ continents, much less extensive than at present; and
“ that owing, probably, to the successive effects of
“ volcanoes, other subterranean powers, and a deluge,
“ the seas may have left it.

“ In the sandy, and other slimy depositums, are
“ found trunks of trees entire, and fragments of wood
“ petrified, and often mineralized, by copper, or iron,
“ Petrified wood is often found in the sand-hills on the
“ plains, nay, in the sandy heights of the Syfran on the
“ Wolga, changed into very fine bone, which has pre-
“ served the original texture of the wood, and is re-
“ markable for the vestiges of those gnawing worms
“ that attack the bottom of ships, and other timbers
“ laid in water, and whose proper origin is from the
“ Indian sea. Here are also interred the remains of
“ the larger animals of the Indies: the bones of ele-
“ phants, of rhinoceroses, and of monstrous buffaloes,
“ are frequently dug up in numbers, and are the ad-
“ miration of the curious. These great bones, laid in
“ beds,

“ beds, mixed with little calcined *tellinæ*, bones of
“ fishes, &c. prove sufficiently that they have been
“ transported by inundations; and was what convinced
“ Dr. Pallas of the reality of a deluge, that had hap-
“ pened on our earth. But the carcase of a rhi-
“ noceros, which Pallas has deposited in the cabinet of
“ the Academy of Sciences at Petersburg, and which
“ was found with the skin entire, the remains of the
“ tendons, ligaments and cartilages, in the frozen lands,
“ near the banks of the Uli, is another convincing
“ proof, that it must have been a most violent and ra-
“ pid inundation, which could formerly have carried
“ such carcases towards these frozen climes, and, be-
“ fore putrefaction had time enough to destroy their
“ softer parts,

“ It must then have been that deluge of which almost
“ all the antient people of Asia, the Chaldeans, the
“ Persians, the Indians, the Thibetans, and the Chi-
“ nese, have preserved the tradition; and fix it within
“ a few years of the general deluge of Moses; to
“ which subsequent inundations may have added their
“ influence.”

The greatest curiosity in mineralogy, discovered in the district of Krasnojarsk, is an enormous mass of pure iron, weighing 40 puds, or near 1500lb. on which I shall expatiate a little. This most curious mass was discovered in 1750, on a mountain where they made a trying-

trying-pit for iron-ore, and where it lay on the surface, but not then thought worthy of notice. Among the miners who made the discovery, was a Mr. John Mettich, who gave me the following account of the situation of this iron-mass, in writing. " In 1749, a reformed Cossack, an inhabitant of Ubeiskaja, announced a hard iron ore at the top of a high mountain (describing that where the mass stood). This iron-ore stood lode-like, on a little rock-shelf, turned to the north. I was sent to examine it, and found it on an assay, to have gold alloy. The lode stood in a hard, chertz-like, grey matrix, of which the whole mountain seemed to consist. About 150 fathoms south-west from this spot, I observed, at the top of the mountain, thinly over-grown with red and white firs, a lump of iron, apparently above 30 puds in weight, full of yellow, hard, little stones, of the size of a cedar-nut, which could not be knocked out. This, and the sound, appeared to me remarkable; yet I cannot say it grew thus naturally, or whether it was brought there, as it was lying, on day, on the surface of the ground. On a strict examination, I found no traces of old mine-works, or smelting-hearths, throughout the whole extent of the mountain. I know, that this Cossack afterwards carried the lump away; but what is become of it, I cannot tell."

All these circumstances were found true, after the mountain had been strictly examined. The iron ore is
a solid,

a solid, blue-black, with here and there a magnetic quickstone metal, yielding on assay, a 70th part of raw iron. The Cossack, who is now a blacksmith, could not tell the exact situation, or place, where this iron lump lay; but what he said, was probably agreeable to what Mr. Mettich wrote down. He averred, that it lay quite on the surface, on the top of the mountain, without being encompassed with any other cliff or strata. He also assured me, that he never found any mark of an old smelt-hearth, or work, neither on this, nor on the opposite mountain. But as the malleability and whiteness of the iron, and the sonorous sound of the lump, made him suspect it might contain some more noble metal than common iron; and his suspicions being still increased by the Tartars, who considered it as a sacred thing fallen from heaven, he endeavoured, as no works were ordered, after having announced this one, to convey it to his dwelling, at 32 miles distance, which he did with the greatest difficulty.

I received information of this piece of massive iron, in November 1771, by a Tartarean soldier, who was very useful to me in collecting matters relative to natural history. This soldier entered by chance the house of the above Cossack who found the iron, and seeing it in his yard, it struck him as a curiosity. Knocking off, with great trouble, a few, little pieces, he brought them to me for an assay; but as this assay, though imperfect, seemed very ferruginous, I ordered the soldier
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to go, without delay, to the village where this man lived, which was 170 miles distant from Krasnojarskaja, and bring me the whole mass, which weighed above 42 puds.

The whole seems to have been encompassed by a raw, ferruginous crust, which was lost by hammering it, to knock off some pieces. The whole, internal part consists of a slender, white iron, interspersed with little holes, or cells, like a sea-sponge; and the interstices filled with round and oblong drops, of a yellow, transparent and pure glass, or hyacinthus-flux. These drops have various, oblong, round shapes, and a very smooth surface, with one, two, three, or more flat sides, about the truncated part of their rounded bodies, which flow often together, with other drops. This texture and drops are from the size of a grain of hemp-seed, to a large pea, and either of a pure yellow, or a yellow-brown, or greenish colour; and are uniform throughout the mass, without any appearance of smelting, or artificial fire. The iron is so tough, that three or four smiths were working a whole forenoon, to knock off a piece from one of its corners; though such piece weighed seldom more than a pound or two, except one piece that weighed a pud, and was sent, for assay, to the Academy of Sciences at Petersburg. By the blows, the flux is reduced into a kind of glass-dust, and often falls out in whole drops, with which glass might be cut. In short, the whole mass, and each piece cut out from
it,

it, proves incontestibly that this huge production came out of Nature's lap. But he whose eyes cannot be convinced by the sight of it, will find the following remarks not quite useless.

It appears, that the ancient miners, whose bing-places and smelting-hearths are to be met with in the metallic districts about the Jenisei, never worked any iron, nor had any knowledge of it; as all tools, even their military weapons and knives, were made of cast copper; but wherever these trying-pits are seen on ferruginous ochres, they had gold alloy in view. Their bing-places consist of raw stone, and melt-copper pebbles; and wherever any iron bing-places are found, it is known, that their proceedings were so poor and imperfect, probably on account of their unsettled and vagabond way of living, that they would never have been able to melt a lump of four puds, much less one of 40 puds, which would require a very, high blast; and should this be considered as possible, against all probability, yet there could be no cause why such a huge mass, unfit for smith's work, on account of the flux with which it is mixed, should have been conveyed from the place where it had been smelted, to the lofty and steep top of a mountain, destitute in itself, and its vicinage, of all marks of works, or smelting.

That such a large mass of iron must have been melted by a very, high blast, has been the opinion of *Mons. de Engelstrom*,

Engelstrom, in a discourse he held, on the 4th of May, 1774, in the Royal Academy of Sciences at Stockholm, occasioned by the description here given of this mass of pure iron, published in the Petersburg, and other foreign gazettes. Before I had seen the whole mass, I was almost of the same opinion; but afterwards was very particular in enquiring and examining, whether there were any traces of smelting-hearths on the mountain where the lump was found, or its environs; though its huge size alone, shewed the incontestible impossibility of its being so produced; which I found confirmed by my search. *Mons. de Engelstrom* says, "The transparent flux intimates a previous smelting." He must certainly mean, a smelting in the bosom of Nature, or his reasoning deserves no assent of mine; though I never saw any mark of ancient volcanoes in the Siberian mountains. I would not have him, however, pin his faith on my credit; but on the credit of the whole Academy of Sciences at Petersburg, and many others, who have seen bunches of this massive iron, not containing the least appearance of coals melted in, nor the least mark of fire, produced by human hands; and the whole mass, which weighs still more than 39 puds, and has been brought to Petersburg, will be an eternal proof of it, in the Imperial cabinet of natural history. The want of natural iron, in the most metallic mountains of Sweden, is so little a proof against the existence of it elsewhere, as against the truth of there being red-lead spar in Siberia, because there has
not

not been any found in foreign mines ; or of the tin ores in Russia, because they have not yet been discovered in the Uralian and Siberian mountains.

The true account above given, and the following arguments, must insure the belief of every one ; because, if all other circumstances were unfavourable, and contrary to fact, the following reasons must prove, that the lump of iron in question is natural, and no production of artificial fire. Iron melted in fire, looks blackish, dry, and not transparent ; but the flux, in the massive iron we have been speaking of, is pure, transparent, looks fattish, and falls to pieces, if the bunch is put into the fire. Had the grains been mixed with iron in artificial fire, the whole mass would not have so closely been filled up, but the iron must have been impure, and full of holes. There is no artificial fire that can give iron so regular a form, resembling a sponge ; it would have been in grains, and rough pieces, blown together, like impure bings, when taken out of the blast. All these circumstances put it beyond the shadow of a doubt, even to those who have not seen the lump ; and those who have, must be convinced by ocular demonstration.

Winter began very soon in the present year, and spread, in December, its uncommon, chilling blasts throughout the country. On the 6th and 7th of December was the severest cold I ever yet felt in Siberia ;
the

the air was still, and, as it were, thickened by it; and, in the serene sky, the sun looked as if enveloped in a fog. The 6th, in the morning, I looked at my hair-tube thermometer, acknowledged to be an excellent one, and it pointed but at 235 degrees; the mercury had retreated into the little globe which this instrument has, and some little columns stuck in the tube, and stood fast: a circumstance I never observed in my thermometer, for the eight years I had used it. The warmth of a moderately heated room, to which I carried it from the gallery of the house, occasioned the stopped column of quicksilver to drop instantly, and the quicksilver in the little globe rose, after the space of half a minute. I repeated this experiment different times, and always with the same success; so that sometimes but one, and sometimes more than one, little piece of mercury, stuck in the tube. When the globe was warmed by the fingers, the quicksilver rose, and we saw plainly that the frozen, sticking columns made a long resistance, and were finally drawn up by a kind of sudden impulse. During this, I put into an open basin, about a quarter of a pound of mercury, which had been thoroughly cleaned by vinegar and leather, and also well dried, and set it in the cold, in the gallery on the north side of my lodging; and, in less than an hour, I found its borders and surface fast frozen; and, in a few minutes more, the whole was condensed, by natural cold, into a soft and little mass, whilst the part beneath the surface was not frozen. The frozen part exhibited
all

all sorts of branch-like wrinkles; but the most part remained smooth. The frozen part of the mercury was more flexible than lead; but bent short, it was more fragile than tin, and, in thin plates, was somewhat granulous. When struck with a hammer, if the hammer was sufficiently chilled, the quicksilver fell into drops at every blow; so it did with the finger, whose end, when touching the mercury, felt, as if benumbed. In a temperate room, it thawed, like wax, over the fire, drop by drop, from the surface, not melting at once. If the frozen mass was broken in the cold, the broken pieces stuck to each other, and to the basin wherein they lay. Though the frost seemed to abate a little before night, yet the frozen mercury lay unchanged; and the same experiment, with the thermometer, could be always repeated. On the 7th of September, I had an opportunity to make the same observations, during the whole day; but, a few hours after sun-set, arose a north-west wind, which raised the thermometer to 21½ degrees, and here the mass of quicksilver began to dissolve.

Shortly after, Lieutenant-general *De Brill*, governor of Irkuzkaja, assured me, he found there, on the 9th of December, at four in the morning, that all the mercury in a thermometer and barometer, made by the most skilful hand of Professor *Laxmann*, during his residence in Siberia, was hard frozen. In the barometer, it stood at 28 inches seven lines, and was in small pieces

of five-lines each, to the top. Towards 11 in the morning, it was fluid again; and, at one o'clock, the barometer was 29 inches seven lines high; and at nine at night, 29 inches. The thermometer was chilled to 213° , and beneath 226° was an empty space of nine degrees; about 11 o'clock all had entered the globe, and about 10 o'clock next morning, when it thawed again, it rose, and pointed 254° ; and, at three o'clock, and some minutes, 194° : all, according to *De Lisle*. The air, the whole day, was calm and serene.

From Mr. *Sokolof's* tour along the Daurian frontiers, which he undertook, in pursuance of my directions, in the course of the last summer, I must not omit mentioning a hot well, which he visited on the 25th of July, famous, among the Tunguse Tartars, for its salubrious qualities. It lies straight north from the frontier-guard, on the banks of the Balyra, at the distance of two good day's journey, or 112 miles. The water is perfectly clear, but a little bluish, has the smell and taste of gunpowder, or rotten eggs, and is so hot that one can scarce bear the hand in it. On account of the great heat, thick vapours rise from it in summer-evenings. Many rich people come here and bathe in it, and are very often radically cured. The Tunguse adore this spring, drink the water with a sacred awe, and dare not bathe in it with any part of their cloaths on. There are other hot baths, in this district equally salubrious.

Not

Not far from Altanskoi-Karaul, is one of the highest mountains of Dauria, called, by the Russians, *Tschokonda*, and, by the Tunguse, *Sochondo*. Mr. *Sokolof* travelled on it from the 3d of July to the 3d of August; it is very steep, wooded with cedars and larch-forests, and the underwood consists of birch-bushes. Near the source of Aguzakan, on this mountain, is a very steep cupola, or tower, where the huge, bearded vultures annually build their nests; close by, is a level ground, encompassed by the forest, from whence one may overlook every thing below; and beyond it we view, with awful amazement, the steep, rocky cliffs, whose snow-clad, blue summits are veiled by the clouds. It rains here almost every day, and the air is in continual motion. In the middle, the north-wind causes snow, and white frosts; the trees, at the same time, cloathed in their best green. The snow-covered cliffs occupy a great space below, and between which are the sources of brooks that flow down into the rivers beneath. There are also, two principal cliffs, running from south-west to north-east, with a dreadful, deep valley between them, in which the river Aguza has its origin. The nature of these two cliffs, or summits, is extraordinary; they consist of enormous, bare strata of mouldering granite, towering up, one over another, into the skies. Mr. *Sokolof* was the whole day ascending that at south-west: it rises, like the other parts of this mountain, with huge, steep rock-shelves, of which he counted six, resembling broad stairs. Over each shelf, the rocks form a flat space

of ground, near half a mile broad, on which various springs rise, and tumble down the cliffs with a frightful roar. The utmost summit of the cliff, which cannot be ascended without danger, is very horizontal and flat. Upon it are two frightful abysses, encompassed by steep-rock walls; at the bottom of each is a little lake, formed by the snow-water from the rocks, gathering and flowing into them through clefts; and thus into the middle of the valley, in which the Aguza springs. The superstitious Tunguse worship this mountain, as the shrine of the offended gods; and, for this reason, they do not attempt to climb it, supposing the ascent impossible: of course, they stood amazed at Mr. *Sokolof's* journey on it, and his safe return.

As no remarkable part of the southern district of Siberia was now left unexplored, and it would have been useless to have travelled over the district of the Lena, and the eastern parts of Siberia, Messrs. *Gmelin* and *Steller* having gone before me; and as it was impracticable to penetrate into Mongalia, or China, I resolved to return this winter, in sledges, at half the expence I came here; and, if possible, to go as far as to the Kama. I had now fulfilled my commission, and travelled over all the ground pointed out to me by the Academy of Sciences; and having dispatched Messrs. *Sokolof* and *Bykof*, in December, to the Wolga, there to wait, to collect the vernal plants on the opening of spring, my own departure from Krasnojarskaja was fixed for

for the beginning of January, my plan being to wait at Tura, for the arrival of Mr. *Georgi*; but receiving, from this gentleman, a proposal to wait for him at Krasnojarsk, he being detained longer in his tour than he expected, I consented to it. Mr. *Georgi* having failed round that immense lake, called the Baikal, as far as to the mouth of the Selenga, which he reached in autumn, he went out here, partly on account of the stormy weather, and partly to see the Daurian mine, at a good season of the year; and sent his vessel back to the mouth of the Angara. Mr. *Georgi*, and his attendant, arrived in Krasnojarskaja, the 22d of January; and having settled with him our plan of future proceedings, I left that place the same night, and made the best of my way, in sledges, to Tomskoi, a distance of near 500 miles; travelling, night and day, for that purpose, and arrived there on the 26th.

The colonies about Tomskoi, are in the most wretched state, as to people. There is, every where, a want of women; so that the young men abandon themselves to all sorts of vice. The better class of people, who have the first choice, are most unreasonable. Among the number of new colonists, I saw many sick and infirm people, several madmen, and married persons without children, and a great many old people. Of course, this must be very unfavourable to population; but what is still worse, they have taken many fathers from their wives and children, and sent them, heart-

Q 3

broken,

broken, into these places of wretchedness; and those who can forget their families, have been constrained to take other wives, in order to solace their hours, in their employment here. Many of them told me their stories, bathed in a flood of tears, and their hearts bleeding, at the recollection of having left their children behind, under the most intolerable yoke of tyrannic despotism.

I remained in Tomskoi till the 29th, that I might not follow my baggage too closely, when I set off, in the evening, for Tara, or Tura, a further distance of 480 miles.

The Tartars on the Barabynian step, where, on account of the number of lakes, there are vast quantities of water-fowls, &c. are much employed, in catching plovers (*Colymbi*); the silver-like, glittering, breast-skins of which, they sell to passengers, at from three to five copecs a-piece; and, also, in collecting the beautiful, violet-bluish throats of sea-plovers (*Colymbi arctici*) and the glossy, green heads of the wild March-ganders, which, when sewed together, have a beautiful appearance, and make very splendid muffs for the ladies.

In this country, particularly about the fortress Kainkoi, where the brook Kainska flows into the river Om, are numerous colonies, settled on account of the great fertility of the soil, which yield plenty of corn and flax.

I reached Tara, during the nights of the 3d and 4th of February, and Mr. *Georgi* a few days after me. He brought with him a rare collection of plants, minerals, and other curiosities, which were to be sent on to Petersburg, on sledges; and we chose this city for business, as we could be here well accommodated; and I continued here till the 23d.

Tura. The city of Tura, or Tara, lies on the elevated, left border of the Irtysh; and is two or three miles in extent, along the bank of the river. This place is to be built, by degrees, with geometrical exactness; and has already above 100 new houses, which give it a gay appearance. They are encreasing these buildings every year. The number of houses, in all amounts to 669; and the male inhabitants, are 1715, of which 252 are of Bucharian extraction, and one descended from the Siberian Khan Kutschum. The place has five churches, and a cathedral now building with stone. This last, with a court of waywodes, some Imperial store-houses, the treasury of the fur tribute-office, and the gunpowder-magazine, are encompassed with a wooden wall; otherwise, there are no partitions, except the vestiges of some old palisadoes and bastions.

Tara has a governor, a small garrison, and a court of waywodes, subordinate to Tobolskoi; to which also belongs the towns, Omskaja, Tschernoluzkaja, Tatmyzkaja, Tjukalinskaja, Bergamatskaja, Ajeffskaja,

Ust-Tartaskoi-Pass, 103 Russian, and 138 Tartarian villages. The number of tributary Tartars in this district, including a few Cossacks, is 5,248; among which there are 2344 Barabynian Tartars, and 574 citizens, of Bucharian origin.

As the district of Tara has very extensive wildernesses, and, in its northern parts, some dark vallies, it abounds with game. The fables here are not even so valuable as those of Tomskoi; and, of course, are very bad. The other animals are bears, wolves, foxes, martens, ermines, squirrels, beavers, otters, lynxes, and hyenas. In the northern woods, they catch rein-deer; and, in the Barabynian step, elks, deer, and wild boars,

This district is also rich in fish; and the Irtysh abounds with sturgeon, hufos, *nelma*, *taimeni*, and *lenki*; and the lakes of the Barabynian and Ischimian steps are crowded with pike, barbel, and whittings, plentifully caught during the whole winter. Notwithstanding the land lies low, it contains some remarkable, mineral earths,

Our business being completed, on the 23d of February, Mr. *Georgi* left me, according to a plan agreed on, and took his road to Tobolskoi. He travelled in sledges, as far as the Isset; and, in spring, went up the mountainous side of that river, as far as Catharineburgh; then

then down the Tschuffowaja to its mouth, in order to take a view of the habitations betwixt the Sylva and Kama; and then along the Ufa and Djama, to the Jaik; and so, by a new road, through the Jaikian step, to the Wolga. I went the straightest road, through the Ischimian step, the province of Iserskaja, and the northern part of the country of the Baskirians, intending to go, the next spring, from the Kama towards the Jaik, and through the southernmost part of the deserts, situated between that river and the Wolga, in order to collect such vernal plants as I missed the time before.

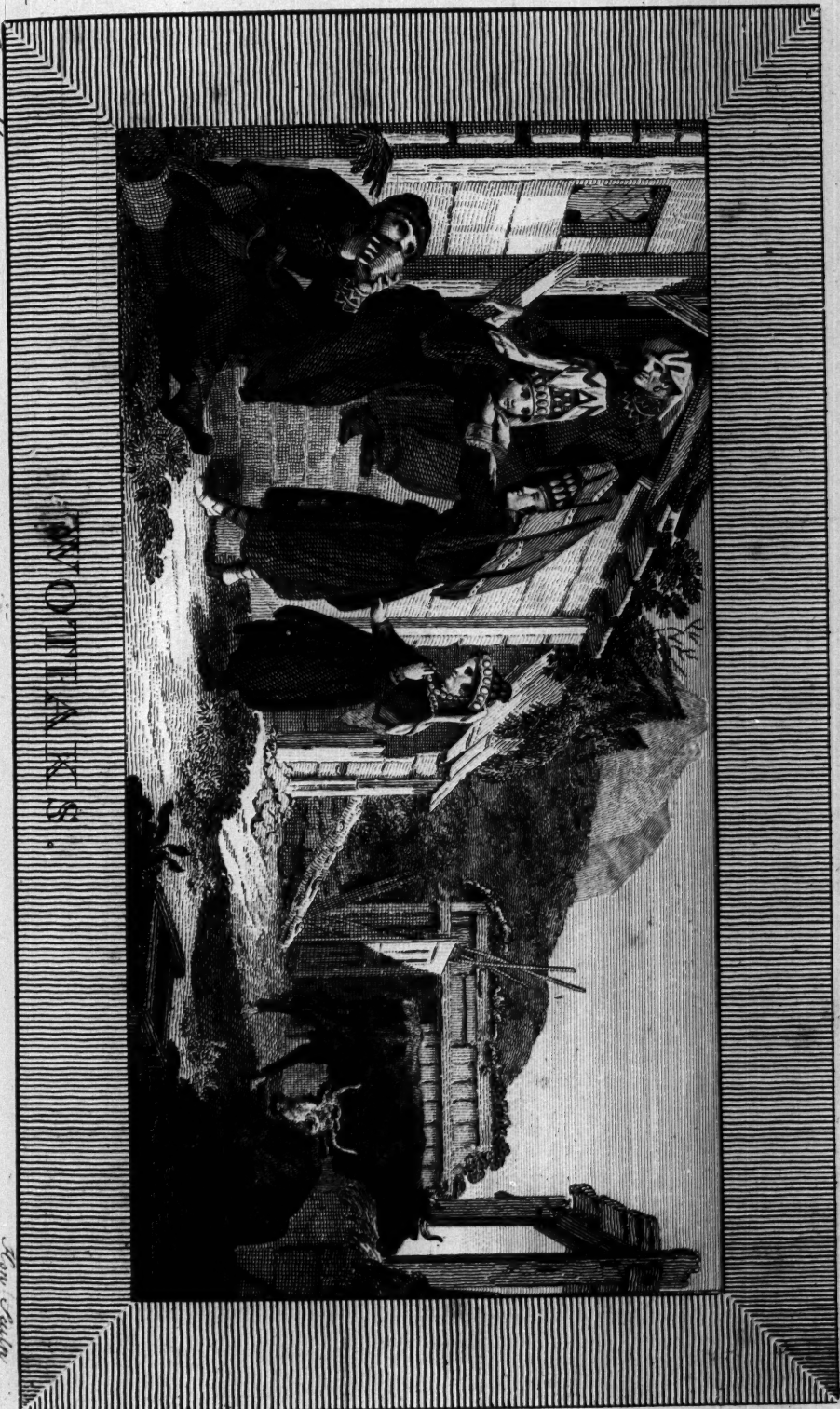
Having travelled the chief part of this road in 1770 and 1771, and given my readers every thing worth notice, it would be idle to repeat it. After travelling over 1100 miles of ground, we reached Sarapul, on the 11th of March; and having, in this journey, met with the Wotiaks and Tscheremisses, I will here give some account of them.

Among all the little nations, of Finnish origin, for such are the Tscheremisses, Wotiaks, Eastjaiks and Mordvines, the Wotiaks are the least dispersed in the Russian empire, and still inhabit their ancient abodes. According to their own account, their princes had formerly, in the place where Askoi Prisgorod now stands, a fortified residence; but the Tartars obliged them to quit the same, and take refuge in the thick forests,
towards

towards the Wjatka, and Upper Kama, which has its name from them; *Kam*, in Wotiak, meaning a large river.

The Wotiaks, or Oudmurt, as they call themselves, which signifies Man, have some characteristic marks which distinguish them from their neighbours, the Tscheremisses. They are more lively, more gay, and less obstinate; both men and women are addicted to tippling, which must be attributed to the liberty they formerly had of distilling spirits, without any impost; being very little mixed with Russians, or other strangers. There are not many tall and well-formed people among them; the women, in particular, are little, and of mean appearance. No nation is so red-haired as this; yet there are some few with black hair, and some men have light-coloured hair on their heads, and reddish beards. They are not so cleanly as the Tartars, yet more so than the Mordvines, and Finlanders; and, in their houses and cloaths, are similar to the Tscheremisses. As their vessels and victuals are most disgustfully nasty, so is their strong liquor disagreeable to the taste; though, in the distilleries, they spare neither malt, nor honey.

Plate
1013 The head-dress of their women is the most peculiar, and enormous, of all the nations subject to Russia. They bend a piece of birch-bark, about six inches broad, into the form of half a cylinder, so as to fit the
top



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top of the head ; it is kept in this form, by a bow of wood in the inside ; and, in the opening behind, a narrow piece of birch-bark is placed. On the top of this cylinder, they fasten another piece of birch-bark, bent into a square, six inches broad, inclining a little forwards, like our grenadier's cap ; the upper part is covered with red, and the lower with blue cloth, which is usually ornamented with copecs, and little tin plates. What gives the best appearance to this scaffold, is a cloth, an ell long, sewed on the edge with red, blue and brown needle-work, and has, round about it, blue, red and white fringes, three or four inches long. This cloth is fastened on the upper border of the birch-bark, so that the ends hang down on each side, having the ornaments visible between them ; and the rest of the cloth hangs down behind on the back. Underneath this head-dress, the women wear their hair twisted, on both sides, over the ears, so as to resemble a thick knot, ornamented with beads and jingling toys. No married woman will appear before a stranger, without such a bonnet ; and should any one enter a Wotiak house, at night, they will even go to bed in this head-dress ; which they wear, also, in doing the business of the house. Widows, and very old women, free themselves from this incumbrance, and wind a cloth, like a handkerchief, round the head, letting the ends, which are embroidered with needle-work, hang down behind.

Their cloaths are also singular. Their upper-garment is long, made of cloth, or linen-stuff, with long sleeves,

and open, like those of the Polanders ; through which they put their arm, fastening the narrow end to their girdle behind. About the neck is a square fall-down cape, like a collar. They wear shifts, embroidered with needle-work about the neck and wrists, and breeches quite tight to the limbs.

Girls, like the Tartars, wear round bonnets, ornamented with beads and coins ; with this difference, that they hang an embroidered cloth, floating down behind, with a kind of bead-necklace, hanging loosely from one ear to the other, across the neck before, braiding their hair behind, and concealing it beneath these cloths. From the girdle hang strings and fringes.

The architecture of the Wotiaks is but little different from that of the people of Tschuwa. Their houses are scattered, without pales, or enclosures ; and contain large, sleeping benches, and Tartar furniture. They are good husbandmen, keep bees in hollowed trees, hunt all the winter, and are able shooters.

I can say but little of their religion, but what has been said in the Collections of Russian history. There are but two heathen villages remaining among them ; and though the christian Wotiaks, in the regency of Casan, chiefly profess paganism clandestinely, yet they are afraid to be noticed, in so doing, by the Russian clergy that reside among them. I gathered, however,
the

the following account of these pagans, who inhabit the regency of Orenburg. Besides the great god, called, by them *Inmar*, they worship the god of earth and prosperity, *Mu-Kalzin*; the god of water, *Wu-Inmar*; also, the sun, as the throne of the Supreme Deity; and other subordinate divinities. They call upon these, in the hour of necessity, especially on their annual festivals, and at their solemn sacrifices, where an old, sacerdotal man, called *Tona*, says prayers.

Their *keremets*, or places of sacrifice, are in pine-woods, especially on a well situated and elevated spot (*Kufs*), surrounded with white firs, and enclosed. They celebrate four, general feasts in the year: the first, *Butschun-nunal*, is, in the Russian easter-week, at which time begins their new year, with feasting; the second, or *Tulys-nunal*, falls after summer seed-time, at which they offer prayers, and victims, to the god of the earth. *Wissasko-nunal*, is a day of supplication for a good harvest, celebrated in one, or more, houses, of a village; and in which they sacrifice sparrows (*Kutscho*), caught in snares, and fed for that purpose. These they burn in a fire, to obtain good weather, and easy work. *Keremet-nunal*, is their greatest festival; this is celebrated after harvest, by the whole village, in its *keremet*, with solemn sacrifices. On this occasion, they consume a horse, of any colour except black, a bullock, a sheep, a goose, and a duck. The horse is the last slaughtered animal; and this, by an assistant of the
Tona;

Tona; and all are dressed for a sacrificial meal. The fat and blood are burnt; but the head of the bullock, and sheep, with the whole skeleton of the horse, are suspended on a fir-tree, in the keremet. The skins are taken home, and sold. The prayers, repeated during these sacrifices, are directed towards the meridian sun, never towards the east.

Tooke tells us, from this Collection of Russian histories, " that the dress of the Wotiak men, is like that of
" the Russian boors; only that it is commonly made of
" coarse, white cloth; that their winter-caps are of
" cloth, with a border of a different colour; that
" they tie a knife to their girdle, and a case, for a
" hatchet."

He says, " they are honest, peaceable, hospitable,
" and sober; but superstitious, of cold complexion, and
" extremely simple. The women have winking eyes,
" and smile, even to ugliness. They are short, timid,
" very modest, chaste, laborious, and complaisant.

" These people speak a language of their own, derived from the Finnish language, but have no writings, or letters. In reckoning, they make use of
" little sticks, which they call *Pos*, a kind of tally,
" which they notch. Instead of a signature, they use
" certain marks, called *Hand-marks*. They do not
" reckon their time by years, but give different names
" to

“ to the months, in conformity to natural events. Thus
 “ the month of March is named, *Silpron Talis*; i. e.
 “ the month of the breaking-up of the ice; the like of
 “ the rest. Friday is their sabbath, or day of rest.
 “ With them, as with other nations of Asiatic Russia,
 “ Wednesday is called the day of blood; on which day
 “ they never undertake any thing of importance.

“ The Wotiaks, or *Votiaks*,” as *Tooke* calls them,
 “ never compose large towns; but live in villages, and
 “ are always ready to transport their habitations from
 “ one place to another, as appears eligible. The in-
 “ terior disposition of these villages, the houses, the
 “ œconomy of the people, their food, taxes, and ge-
 “ neral constitution, are like the *Tscheremisses*, which
 “ will be treated of. To the chief of villages, they
 “ give the name of *Ellir*; and to their starosts, or el-
 “ ders, that of *Kartlik*. They are a very retired, re-
 “ served people, and suffer no strangers to come
 “ among them; and it is very seldom that any litigation
 “ is brought before the tribunal of the province.

“ They are assiduous in rural œconomy; and, at
 “ their leisure hours, employ themselves in turning
 “ cups, spoons, shuttles, &c. and varnishing all kinds
 “ of bowls and cups. The women employ themselves
 “ in sewing, making linen, coarse cloths, and felts,
 “ making cloaths, and embroidery. There are not
 “ many rich among them, neither are they poor; he
 “ who

“ who possesses from 15 to 25 desettines of land (which
 “ is a piece of ground 560 feet long and 280 broad),
 “ with 30 horses, and other cattle in proportion, passes
 “ for a rich man, of the first class.

“ Their manner of salutation is to give hands, and
 “ say, *Diesban*; that is, Health, or Prosperity! The
 “ women, instead of embracing, strike one another with
 “ both hands on the shoulders. Abusive terms among
 “ them are, *Schoü ourdam*! Thou walking carcase!
 “ *Vistan schäitan*! Thou stupid devil! *Schäitan med*
 “ *bastos*! The devil take thee!

“ Every village has a number of baths; here the
 “ women lye-in. On the birth of a child, the father
 “ sacrifices a white ram, to the genius, or tutelary
 “ angel of the new-born infant; at which time, they
 “ feast; and make merry. The names of men, pecu-
 “ liar to this people, are, *Ischmak*, *Danabäi*, *Kamäi*,
 “ *Eltemir*, &c. that of women, *Dalisch*, *Bidelet*, *Beks*,
 “ *Akston*, *Tschanga*; which last signifies a crow.

“ Wives are purchased: some pagan Wotiaks buy
 “ as many as they can; but they seldom have more
 “ than one or two. The marriage-contract is called,
 “ *Yeraschou*; the price paid *Yerdoun*, and which is ge-
 “ nerally from two to fifteen rubles; and the dowry
 “ of the bride, is always in proportion to the marriage-
 “ price. They never marry their sons under ten years
 “ of

“ of age ; nor their daughters, till they are 15 ; and
“ it is always interest that determines the choice.

“ On bringing the Yerdoun to the father-in-law, the
“ young man takes back his bride, who is delivered
“ to him veiled. On his return home, he finds guests
“ assembled, at his father’s house, to whom the bride is
“ presented, after being previously taken aside into an-
“ other room, and cloathed in the dress of a married
“ woman, who, whilst the *Tarkai*, or priest, makes the
“ oblation of a cup of beer to the gods, sits in the
“ door-way, on a piece of cloth, laid there for that
“ purpose. The object of the offering, is to procure
“ bread, riches, and children, to the new-married cou-
“ ple ; who drink of the beer, blessed by the priest,
“ which act may be called, the sacerdotal benediction
“ of the nuptials. This done, one of the bride-maids
“ presents beer, or mead, to all the guests, and the
“ bride kneels down before every one of them, till he
“ has drank off the goblet ; they then eat and drink,
“ as much as they can, and dance, till the young peo-
“ ple are put to bed.

“ Some weeks after, the bride’s father pays her a
“ visit, examines into the house-keeping, and pays her
“ husband the remainder of her fortune ; or, in lieu of
“ it, gives some pieces of household-furniture, and
“ takes back his daughter with him, whom he keeps
“ from her husband two or three months, and some-
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“ times even a whole year. During this time of ab-
 “ sence, she dresses like a virgin, and is employed at
 “ work for her parents and herself, occasionally. At
 “ the expiration of the determined time, the husband
 “ comes to demand his wife, who shews as much re-
 “ pugnant at following him, as she did on the day of
 “ her marriage, cries as much at leaving home, and
 “ goes to bed to her husband with the same reluctance.
 “ She soon, however, suffers herself to be persuaded,
 “ and easily admits of consolation. The friends of the
 “ family are again regaled, and make even greater mer-
 “ riment than they did on the wedding-day. A widow’s
 “ wedding is conducted with much less ceremony: they
 “ dance, to the sound of the pipe, called *bys*; of the
 “ Russian *balaleika*, a kind of guitar, with only two
 “ strings; and of another instrument, which they call,
 “ *oumkrefs*.

“ Before they bury their dead, they wash the body,
 “ and cloath it in complete apparel; and, as they al-
 “ ways carry a knife, fastened to their girdles, so they
 “ give one to the deceased, taking care, however, to
 “ break off the point. They lay a cake upon his
 “ breast, and fix a lighted torch by his side. At the
 “ interment, they throw some copecks into the grave,
 “ and pronounce these words, *Tought inti sot soui!*
 “ O earth, make thou room for him! The body is
 “ laid in a kind of coffin, with some skillets and
 “ hatchets, lasts for making mat-shoes on, and other
 “ useful

“ useful implements: As soon as they have filled up
“ the grave, they stick some lighted torches on it, then,
“ throwing three eggs, boiled hard, and cut into small
“ pieces, on it, they say, *Tiogafet medou sos!* There,
“ keep that for thyself! On coming from the burial,
“ the friends walk over a fire made before the house
“ of the deceased, rub their hands in ashes, bathe, and
“ change their clothes, and then make merry. These
“ ceremonies are always the same, to people of every
“ condition, age or sex.

“ On the second day after the interment, they ce-
“ lebrate the first, commemorative festival called, *Pe-*
“ *mionka*. At this feast, instituted in honour of the
“ dead, his friends assemble in his house, and partake
“ of cakes and beer, a portion of which they carry
“ out into the yard, and repeat, as before, *Tiogafet*
“ *medou sos!* The words are addressed to the deceased;
“ but the dogs take care of the provision. On the
“ seventh day, they sacrifice a sheep; on the fortieth,
“ a horned beast, or a horse. All the victims are eaten,
“ in memory of their departed friend, to whom they
“ send his share. On the Thursday in Passion-week,
“ they celebrate a general, commemorative festival; at
“ which they assemble, every one, at the tomb of his
“ relation, light up torches, eat cakes and the flesh of
“ some victim, leaving a portion on the grave of his
“ family.

“ It will readily be conceived, that amongst such a
“ people, there is as much superstition to be met with,
“ as among European nations. Some of the nations of
“ the Wotiaks think, that Wednesday and Friday are
“ unlucky days; that the flight of a blackbird, or a
“ crow, a-crofs their path; a cuckow perched on the
“ top of a house, and the meeting of a hedge-hog in
“ motion; are so many presages of death, or at least
“ of dangerous sickness. He who dares to kill a
“ swallow, a lapwing, a pigeon, or a water-wagtail, ex-
“ poses his flock to all sorts of misfortunes. They even
“ build nests for the swallows. They suppose that a bear,
“ that has been wounded in the chace, knows his ene-
“ my, and seeks and pursues him all his life. They
“ take great care not to call a bear by his name, but
“ *Maka*, that is, old man. If a tree is struck by light-
“ ning, it was to destroy a devil which had there taken
“ its abode. Noon is a dangerous time with them, from
“ the first appearance of roses, to the end of August.
“ At every eclipse of the sun, or moon, they fancy it
“ a metamorphose to which these bodies are subject.
“ Among the christian Wotiaks, they attribute the
“ cause of bad harvests to their making no offering to
“ the gods. Whoever would be sure of crossing the
“ water in safety, must first throw a handful of grass
“ into it, and say, *Ero koul monae*, Do not hold me.
“ They have an astonishing number of similar, super-
“ stitious opinions, too tedious to relate. They have
“ also, among them, *Vedirs*, or magicians, who they
“ conceive

“ conceive hold correspondence with evil spirits, and
 “ have even the power of metamorphosing men into
 “ animals. They call him *Oubir*, who has been thus
 “ metamorphosed; and imagine, that, after he has un-
 “ dergone this ideal change, he must for ever be a va-
 “ gabond, and a wanderer.

“ Among the malevolent deities, *Schaitan*, or Satan,
 “ is the chief. He lives in the water, and is hence
 “ called *Vou-mourt*, or watery-man. They have a god,
 “ named *Palas-mourt*, or *Alida*; the former signifies
 “ half-man; the latter expresses the idea of a satyr, or
 “ dæmon of the forests. This god dwells in the
 “ woods, has but one leg, and one eye, which is very
 “ large, and a monstrous nipple to his breast, with
 “ which he stifles men, by thrusting it into their
 “ mouths. The *Albaste* of the Wotiaks is much the
 “ same as our *Ignis fatuus*, or jack-a-lantern; he plays
 “ his tricks, holds his wanton revels in deserted houses,
 “ in bathing-rooms, and uninhabited villages; on which
 “ account they burn all the houses and villages they
 “ abandon, that they may not become a retreat for
 “ these wicked phantoms.

“ They imagine a two-fold existence after death.
 “ The first is, *Dounja yougguit*, a resplendent life, the
 “ inheritance of the good, wherein they enjoy every
 “ kind of happiness a Woriak is capable of conceiving
 “ in this world; the other, *Kouratzin inti*, or the abode

“ of bitterness, containing a vast number of cauldrons of pitch, in which the wicked are for ever boiling.

“ Whenever any epidemic sickness rages among them, they sacrifice a black sheep to Inmar, that he may prevent the devil from doing them harm. The ceremonies of this sacrifice are performed on the bank of some river; and whilst the flesh of the victim is making ready, every father of a family goes with a stick into all the rooms of his house, and beating about him, at every stroke, cries, *Get out of my house!* This done, they fire off a fowling-piece, or shoot an arrow, at a dog, or cat, of the village; which, when killed, they drag with a cord to the place of sacrifice, always going down the stream to it; then leaving the animal, with the cord fastened to it, every one throws his stick into the river, and proceeds to the sacrifice, to which they give the name of *Orvas*.

“ In general, the Wotiaks are very zealous in their religious observances; are very desirous to obtain the approbation of the gods, and use every means to deserve it: in a word, they are devout, and very pious idolaters; but, notwithstanding this, in 1774, there were reckoned 27,228 males, and 27,169 females, who had been baptized, in the kingdom of Casan alone.”

My

My account of the Tſcheremiſſes, who chiefly inhabit the diſtricts about the Wjatka, and the Kama, will be much ſhorter, as I could not meet with an opportunity of being better informed. They are of a middling ſize, with light, fair, or red hair, eſpecially their beards, which are thin. Their faces are fair, with ſtrong features. They are weak, ſlothful, timid, very roguiſh, and more obſtinate than any people I ever ſaw. Some of their women have fine faces, but far inferior to the Tartars; and their common dreſs is very unfavourable to beauty. Their hair they twiſt into two tails, one on the crown of their head, the other on the back part; the reſt of the hair is formed into knots; and, after all, the head is covered with a ſmall cap, embroidered with various coloured needle-work. This is the head-dreſs of the married women; and, when they go abroad, they tie a cloth, worked in the ſame manner, over the head, and under the chin. Girls, who generally go bare-headed, braid their hair behind, in two floating tails; and, when they go out, tie the ſame kind of embroidered handkerchief, or cloth, about their heads; but married women are aſhamed, particularly before their father-in-law, to go bare-headed. All the women wear breeches, and ſhifts of coarſe linen, and a long outer garment of cloth, or linen, with cloſe ſleeves, and a fall-down cape, like that of the Wotiaks. The lower ſeam of the garment is embroidered with various coloured thread, and ornamented with coloured croſſes. The ſhift, on the boſom, is embroidered in the ſame

way, and kept together with two or three large brass buckles. They often wear armlets, or rings, on their arms; and wrap up their legs to an enormous thickness, like the Mordvine women.

Their houses are richer than those of the Mordvines, Wotiaks, or Finlanders; they are scattered about, but without enclosures, and generally consist of a winter and summer apartment, with a portico and stairs. Their inward construction is wholly Tartarian.

They are industrious husbandmen, rich in corn, and in no want of horses or horned cattle. They keep also a quantity of bees. The Tschheremissian heathens, of which there are many, celebrate some of the Russian festivals, such as the week after Christmas, and the Carnival, but only by banqueting and drinking. They have also a strong belief in some Russian saint, and in the Mahomet of the Tartars, whom they call *Piambar* (Prophet). Their own great solemnities are thrice a year; the feast of spring, similar to the Saban, a field-feast of the Tartars, is celebrated a little before Midsummer; every one then cleans himself in a bath; puts on clean under-garments, and assembles for the general sacrifice, when a red-brown horse, and a white cow are solemnly slaughtered in the keremet, the fat, blood, and bones of which are burnt, and their skins suspended on poles during the general supplication. Their second festival, like that of the Wotiaks,

tiaks, is called *Uginda*, and celebrated before hay-harvest, its principal object is Agebaren, the god of Plenty, and to supplicate his blessing on the harvest. The third is the feast of general thanks after harvest. They begin their new year with the Carnival week in March, and this is the commencement of spring.

“ The Tschheremisses” says *Tooke*, “ call themselves
 “ *Mai*, men, and are settled in the government of
 “ Casan and Ninei-Novorogod on both shores of the
 “ Wolga, but chiefly along the left side of that great
 “ river, quite into Permia. They are of Finnish
 “ origin, and speak a language peculiar to themselves,
 “ but have no books or writings. During the sov-
 “ reignty of the Tartars, they were like the Woriaks,
 “ subject to that people.”

Though I spell the word *Tartars* according to the old pronunciation; yet the original word is *Tatars*, and the French and German writers have within these few years adopted this orthography; but, as it will require a better authority, than mine, to change the spelling, I have continued it according to the old method, as I have in calling the city Moscow, which should be pronounced *Moskva*,

“ The Tschheremisses, though formerly they had
 “ princes of their own, now have neither princes
 “ nor nobles, and tho’ in early times they led pastoral
 “ lives

“ lives, being confined to a small district, they are obliged
“ now to turn their thoughts to agriculture.”

“ Their farms consist of a hut of only one room for
“ the family, a few stables and outhouses in the yard,
“ detached from each other, and several little magazines
“ built each on a perpendicular bank, which serve
“ them also for chambers in the summer-season; all
“ these buildings are of wood, forming a square, the
“ area of which, between the different huts, is all
“ open. Their rooms for winter are built at the height
“ of about 4 or 5 feet, over a cellar, to which you as-
“ cend by a few clumsy steps, under a covering
“ of planks. Each room contains, besides an oven, a
“ hearth for culinary purposes and a broad bench for
“ the family to sleep on; sometimes the kitchen is in
“ the dwelling-house, and often is called the Black-
“ room, and black enough, in truth, it is, from the
“ smoke which has no chimney or vent; the doors of
“ their rooms are very low, and instead of a window, a
“ hole is made about a foot and a half square, covered
“ with a bladder, or linen, as a substitute for glass.
“ Their furniture is like that of the Russian villagers.
“ The woman are employed as are the Wotiaks, and in-
“ deed the two nations resemble each other in their
“ persons, manners, and way of living.

“ The dress of the men is nearly like that of the
“ Russians, excepting that they comb their hair straight
“ down,

“ down from the crown, and then cut it all round near-
“ ly close to the head. The collar, waistbands and
“ bosoms of their shirts are embroidered with colour-
“ ed worsted; their coat is made of a coarse Russian
“ cloth, composed of black-wool, and the cape
“ like that of an English furtout, and an opening in
“ the skirts on each side; such also is the dress of the
“ Wotiak men.

“ The dress of the married women is the same with
“ that of the unmarried, only better worked; they
“ wear trowsers, and instead of stockings, wrap their
“ legs in linen rags, and often when they ride, with
“ hay-bands, fastening them on with a rush, or a piece
“ of packthread, wound several times round the calf.
“ Their shoes are made of the bark of trees, cut into
“ slips and matted. In summer they wear only a shift,
“ which is not tucked into the trowsers, but hangs loose
“ all round them. It is also at the neck and wrists cut
“ into a shape and comes down to the knees; the
“ neck, wristbands and seams all covered with a
“ whimsical embroidery of different-coloured worsted.
“ A large buckle holds it together on the bosom, and a
“ girdle round the waist. When they would be more
“ dressed, they put over this shift a habit like a morn-
“ ing gown, made of various coloured cloths and toler-
“ ably fine, and edge it with brown fur. Their caps
“ are in the shape of a cone, made of birch-bark,
“ covered with linen or stuff, and ornamented with
“ glass.

“ glass-beads, little, white shells, and flowers. From
“ this cap, a ribband, three inches broad, ornamented
“ as the cap, falls down the back. Some wear a broad
“ ribband on the forehead, covered with pieces of
“ money and beads, instead of the conical cap.
“ Others wear a number of rings, thimbles, and all
“ sorts of jingling pendants, at their girdles, which
“ ornaments reach down to the joint of the knee be-
“ hind; and as they walk, thus curiously adorned, these
“ trappings are offensive to the ear.”

“ The women, like the Russian country-women,
“ generally chuse to lie-in, in the bath-rooms. The first
“ man that visits her, after her delivery, names the child,
“ if it is a boy, and the first woman, if a girl; the child-
“ ren call such persons afterward *Atai*, Name-father; and
“ *Abai*, Name-mother. Common names of males are,
“ *Sengoul*, *Kispelat*, *Erbaldi*, *Ilmet*, &c. of females, *Pide-*
“ *let*, *Aftan*, *Nasouke*, &c. husband and wife they call
“ *Mari* and *Vata*.

“ The wife is here purchased, as in other Tartar
“ nations, and the usual price paid is, from 30 to 50 ru-
“ bles; some are worth 80, and there are girls that will
“ fetch a 100. As wives are destined to submission and
“ labour, it often happens that a rich father buys
“ wives for his sons, when they are no more than six
“ years old, yet the wives are never younger than fifteen;
“ the wife's portion consists of cattle, so that a boy
“ mar-

5 JA 53



TSCHEREMISSIAN FETCHING HIS BRIDE.

Burney del.

— Published as the Act directs by D. G. Fisher. March. 1789

Single copy.

“ married thus early, finds themself, at the age of ma-
“ turity, often in possession of a numerous flock. De-
“ grees of kindred are observed among them in their
“ matrimonial contracts, and though if one sister dies,
“ they make no scruple of marrying the other, yet one
“ man never marries two sisters at the same time. A
“ boys’ name-father commonly asks a daughter in mar-
“ riage for his name-son, and when he has concluded
“ the bargain, the young people are permitted to visit
“ one another, and then perform the ceremony of
“ changing rings, which is called, *Schergas vastal-*
“ *tas.*”

“ On the day of marriage, the bridegroom, ac-
“ companied by his friends, goes to the bride’s house;
“ and as they have musicians playing before them,
“ numbers of people join the procession, as it passes
“ through the villages. The bridegroom then pays the
“ rest of the purchase-money, distributes presents, and
“ after this, the whole company sits down to eat and
“ make-merry; the next day, the bride, being covered
“ with a veil, he takes her home, notwithstanding
“ all the tears she sheds, and all the resistance she
“ makes.”

“ In the house where the nuptial ceremonies are per-
“ formed, a *Kart*, or priest rehearses a prayer before the
“ Idol of the house placed on a table; the prayer
“ ended, a feast and diversion succeeds, with songs and
“ dances,

“ dances, and the sound of the *Goufli*, the *Schibber* and
“ the *Kobasch*. During these different amusements,
“ they take the bride apart and transform her into a
“ woman; that is to say, they dress her as a married
“ woman. The husband then conducts her into the
“ eating-room, when the *Kart* repeats another prayer,
“ the bride kneeling before him. After this ceremony,
“ she distributes presents, often beer or mead, to every
“ guest, and then returns into her hut. In the evening,
“ the bride undresses herself, but it is not without a
“ deal of resistance, that she suffers the bridewomen to
“ put her to bed. On the entrance of the bridegroom,
“ the door is barricaded, and the next morning, he that
“ represented the father of the bride enters the nuptial
“ chambers with a whip in his hand. If, after proper
“ enquiries, there appear no token of virginity, he
“ shows the bride the whip in a threatening manner,
“ and, in a day or two after, makes her feel the lash
“ of it. In this manner, according to the degree of
“ crimination, they punish the levities and misconduct
“ of their wives, and their negligence in the duties of
“ marriage. The morrow of the wedding-day is
“ spent, also, in jollity, and every one, on returning,
“ throws into the last cup he takes, some copecs, as a
“ present to the new-married folks. Among the
“ christian *Tscheremisses*, almost all the weddings are
“ preceded by this pagan marriage, and often a long
“ time prior to their solemnization by the christian
“ priest. Nor is it uncommon for a *Tscheremissian*-
“ rake

“ take to take the liberty of dispensing with this cere-
“ mony; he lays hold of the girl, takes her home,
“ and as soon as she is with child, gives her father
“ as much for her as he thinks proper.

“ Interring the dead, they dress the deceased in
“ his best cloaths, and put him into a *Schupar*, or cof-
“ fin. The burial is performed on the day of the
“ person's death, and the procession consists of persons
“ of both sexes. The grave is dug east and west, and
“ the head of the corpse is laid to the west. As they
“ believe, with the generality of the Pagans, that the
“ existence after death, is but a prolongation of their
“ actual life, a few particulars excepted, the friends
“ of the deceased put a number of copecs into his
“ girdle, and furnish him with certain, other things
“ that have been necessary to him in life; such as a last
“ for making shoes upon, a stick to drive the dogs from
“ him, and a little bunch of rose-tree twigs for repel-
“ ling evil spirits. As soon as the grave is filled up,
“ every one of the company places a little torch on
“ the grave of each of his departed friends through-
“ out the *Sulugartla* or cemetery, repeating several
“ times, *Live in harmony and friendship*; he then takes
“ a cake, and having eaten part of it, near each of the
“ lighted torches, lays three pieces of it on every
“ grave and says, *This is for thee*. The ceremony
“ closes with placing over the grave a sheet of linen
“ fastened to a pole, like a flag. On their return home,
“ they

“ they bathe and change their cloaths, throwing away
“ the old cloaths of the deceased, and hanging out the
“ serviceable ones, to be purified in the air. Like the
“ Wotiaks, they honour the dead with commemoration-
“ festivals, and the whole village, every year, cele-
“ brates a general one.

“ Their religion is idolatry, and in the performance
“ of it, they implicitly follow the precepts of their
“ priests, who are also magicians, the interpreters of
“ dreams, and the foretellers of fortune. Every com-
“ munity replaces the Kart, or priest, by its own elec-
“ tion, and they take care to bestow the charge on a
“ man reputed for discretion and respectable for his
“ age and irreproachable manners. To every priest is
“ given an *Oudschou* or sub-prefbyter, as an assist-
“ ant.

“ *Youma*, in their language, is the general name for
“ God ; and that the Almighty may be completely
“ happy, they give him a wife, called, *Youmon-ava*,
“ mother of the gods. They have inferior divinities and
“ conceive them to be the offspring of the two supreme
“ deities, and that the government of the world is their
“ proper inheritance, as the sons of god ; some of
“ whom are married, and others live in celibacy. The
“ men address the gods, and the women the goddesses.
“ With them the devil, whom they call *Schaitan*,
“ is the parent and origin of the malevolent god. He
“ hath

“ hath his dwelling in the water, and disseminates calamities, misfortunes and disasters. But the object of their greatest fear is *Koudortscha*, the god of thunder, to whose power they ascribe the fertility of the earth and plenteous harvest: they represent him under the figure of a puppet, cloathed in Tschheremissian garments, put him into a box made of the bark of birch, and place it a corner of the house. They, like the Wotiaks, keep festival days, on which they sacrifice animals, and with similar ceremonies.

“ In the government of Casan, the number of baptized Tschheremisses is calculated, from 1724 to 1774, to be 6,580 males and 5,951 females; but the greater part of these new converts, celebrate secretly the pagan festivals, or at least assist at the ceremonies of their heathen brethren, as much as they can, without being discovered by the clergy, and punished for their obstinacy.”

Soon after my arrival in Sarapul it began to thaw, and as I had planned my summer's tour, to be by water on the Kama and Wolga, and this place was unfavourable for the preparations necessary; I set out the 12th of March for Casan, a distance of 200 miles, and proceeded from thence on my return to Sarapul on the 7th of April. As this is not a journey of observation, that having been done by professor *Falk*, who

S

spent

spent his winter here, I forbear saying any thing on the subject.

Sarapul. Sarapul, which was my residence in spring, is so populous a village, as to surpass many market-towns. It lies along the high border of the Kama, chiefly at the bottom of a height, in which there is still a decayed, wooden fortress, which is said to have been erected during the Baskirian troubles, a parish-church, a house for the bailiff, a court-house, and a comptoir, two wooden churches, and 343 dwelling houses, built in very narrow, winding streets, which are amazingly dirty in spring and autumn. Through this place flows a brook into the Kama.

The villages under the jurisdiction of Sarapul are mostly inhabited by husbandmen, and contain 2640 tributary heads. The Kama supplies the inhabitants with plenty of fine fish, particularly the white salmon, (*Eriox*) and the inhabitants call it *Krasnaja Kyba*, which is usually caught from one and a half archines to two archines long.* The only remarkable, small fishes in this river are fishes of passage, which come annually up from the Wolga, among wick is the gold-fish (*Clupea alosa*) and the Tfshechon (*Cyprinus cultratus*).

Between 50 and 80 miles above Sarapul, are two large iron-manufactories, belonging to the crown, in

* An archine, or Russian ell, is $\frac{3}{4}$ of an English yard.

which

which more than 7000 Casanian peasants and 600 forgesmen are employed, and where they forge annually from 130 to 150,000 puds of bar-iron, which is conveyed down the Kama in barges, and from thence on the Wolga to Astrachan, and so to Petersburg. Both these manufactories are so situated, as to have inexhaustible woods for fire, and great plenty of water. I speak here from actual knowledge, having visited their works myself.

On the 21st of April, I left Sarapul. The peasants about the river Kama begin now to increase among themselves the linseed, or hemp-seed of Wallachia, the first seeds of which were brought there by the colonists from Poland. It is now planted with success in the southern parts of the district of Selenginskaja. On the Kama it grows three feet and a half high, and yields a far finer yarn than that of the common flax.

After travelling 380 miles, I reached the river Samara, at Sorotschinskaja, on the 5th of May, 1773. The bridge here, being not in a proper state to pass over, I sent an express to Busuluzkaja, in order to get proper assistance in this place, according to the order I had received for this purpose from the governor of Orenburgh. I therefore pitched my tent in the plain and dispatched some of my people, and they not only brought with them on the 7th at night, the

assistance I wanted, but a live, wild colt, which had been caught about eight days before, near Tozkaja-Krepost.

The tarpans or wild-horses have encreased much within these few years in the steps of this district; for as the wild country between the Jaik and the Wolga has been uninhabited for a considerable time, these animals used commonly in summer to advance as much towards the north as they could, in order to shelter themselves from the troublesome insects, scorching heat, and avidity of pasture. I am still more and more of opinion, that the wild horses, found roving in the steps of the Jaik, Don and Baraba, are chiefly the produce of some bewildered Kirguese and Kalmuck horses, or of the stallions of the Nomades belonging to this district, with either single mares or whole herds which they carried off. Hence the variety of colour and breed in these horses, tho' the chief are yellow, brown or yellowish. The colt brought to me was one of this colour, and was taken from its dam a few hours after it was dropt. If compared with a tame colt of the same age, it bore the following distinctive marks. It was taller, stronger limbed, a larger head, with more hair about the mouth, the ears considerably longer, and the points bent more forwards; he carried his ears generally backward, like a biting horse, and the forehead was much vaulted, the mane appeared to be thicker and extended further on the withers, the tail was blackish and not much dif-

different: the back was less, rose a little curved, the hoof smaller and more pointed, and the fetlocks curled; the colour was a fallow-fawn with a stripe down the back, a blackish mane, and ass-coloured about the mouth. It looked like a mare-colt, or filley; and the mother, according to the accounts I received from the persons who caught it, was in company with seven other mares, that composed the suite of a wild stallion of the same colour. (*See the representation in the plate, with Sajan Tartar digging Befs*). No, 18

As far as I could learn, that wild species of horse or ass, called by the Kirguese and Kalmucks *Kulan* or *Chulan*, and which was never yet tamed, is not only different from these horses naturally wild, and called by the Kalmucks *Takja*, but also from the *Dshiggetei* of the Mongols. Most people described them to me as bluish, or ass-coloured, with a common ass-cross on the shoulders. Others report that they are of a yellow-brown colour, with a black stripe down the back and a double cross stripe over the shoulders, with shorter ears than those of asses, and a cow-tail like the *Dshiggetei*. The last description I received from an old Cossack, who had escaped from Kirguese captivity, is, that the *Chulan* is a medium between the *Dshiggetei* and the ass. According to the first account they should be the *Onagri* of the ancients; and all agree, that the *Chulan* is so wild as not to be tamed, and swifter than the fleetest horse. These animals go in

S 3
large

large troops, especially in spring, when they wander northwards from the Ural to the mountains Tumada; and when they return in autumn to the warm districts of Persia and India.

On the 14th of May I arrived at Jaizkoi Gorodok, and found the condition of the Jaikian Cossacks much changed since I was there, and by their own fault. The former liberty and constitution of their court of waiwodes was no more, but Lieutenant-Colonel *Simanof* governor of Jaizkoi, commanded them, and had two of the first Starchins or elders, whom the fury of the people had spared in the troubles of 1771, for his assessors. Four battalions of light troops, and a certain number of irregular regiments were quartered in forts before the city and within, also, to keep the peace. Many Cossacks, even of the rank of Starchin, to avoid punishment, were obliged to leave their effects and fly, and some few, who escaped from prison, were roving in the street, and living upon a miserable subsistence, which they obtain by hunting, or privily from their friends. Though matters were not yet settled, they were under proper regulations respecting the fisheries, and one battalion was quartered on the Kirguisian side, to prevent any hostile surprize, and another, as usual, attended the fisheries, commanded by an officer they called *Jertaul*.

The

The horses and guides being ready for my departure, on the 19th I set off at noon, with an escort of twelve *Cossacks* for Sundaef, in order to meet Mr. *Surjes*, whom I had sent before to gather the vernal plants on the mountains of Indeskoi, and arrived there the 21st. On the 24th, we left Sundaef, and took our farewell of the Jaik for good, directing our journey south-eastwards, through the desert step, and the next day, in these wilds, I met with an interpreter in his way from Astrachan, sent with dispatches to Orenburgh. This was the same person I had met at Stauropal in 1769; he was overjoyed to see me, and we spent the night (with his escort, consisting of four Kalmucks) on the same spot.

On the steps of the river Kuschum, the Saigaks, or step-goats were seen, sometimes singly and sometimes in large flocks. The *Cossacks*, in summer, when they have nothing else to do, go out in small parties to hunt these animals, and being unable to consume the flesh or carry it home, skin the best of them, and carry off such skins and their horns. They had also many horns of those that have been killed by wolves or other accidents, which they sell to the Chinese merchants. On the Jaik a couple of Saigak horns are sold from ten to fifteen *copecs*, but on the Chinese frontiers for four times the price. The *Cossacks* of the Jaik, who kill annually a great number of these animals, assure me that there some with three horns; and two or

the Cossacks, in my escort, declared they once killed two, that had but one horn each.

Every where on this step, where the titmouse makes a hole, is a quantity of muscle, and other sea-shells, calcined by the weather, by lying on the surface of the ground; but underneath the soil, in dry, loamy ground, they are found entire, having been so preserved a great number of years, since the time that the Caspian sea covered this district. The whole step along the Kuschum is arid and dreary, and the soil salt; of course unfit for any kind of husbandry, or even for rearing of cattle. The lowest spots are scarce green in spring, and there is not a tree to be seen. On this step we took up our night's lodging.

Whilst we were stopping on the 30th of May, on one of the steps to feed our horses, some one of our company had kindled a fire; and the wind being high, blew it among the high grass and set fire to it. It burst out with great rage, and the flame ran like wild-fire, so as to set the whole spot in a blaze, and we had scarce time to save our waggons, and avoid the fire by running from it. This day we met some armed people on horseback, who were undoubtedly vagabond Cossacks, from the Jaikian district of Umno. We were obliged to lie all the next night under arms. No interruption however ensued, and the next day we travelled on, reached some quicksand hills, and met with

with, between them, the first water-pit we had seen, and indeed the first water for many days. Yet, notwithstanding we had water with us, and a great number of young toads were swimming in these pits, we were induced to make our tea with it, and found it excellent. This same evening we were saluted near the water-pits, by that scarce, black step-lark (*Alauda Tartarica*), which I have spoken of before. They flew here either singly, or in couples, and may be compared in flight and song to the *Alauda Calandra*. Here also in this sandy desert was plenty of those venomous serpents I have mentioned, *Phalangium araneoides*, and a large species of beetle (*Carabus bucida*). If it be true, as the Kalmucks say, that the bite of these beetles of prey is sometimes mortal to cattle, they may be said to be the *buprestis* of the ancients. This sand-desert, which we had just got upon, is called by the Kalmucks *naryn* (the small sand). It begins at 49 deg. N. latitude, between the Great Usen and the salt-lake Altannor, joins a tract of hills, and continues uninterrupted in the middle district, between the Wolga and the Jaik, as far as the Northern coast of the Caspian sea. There it forms a cape. This sandy desert, in general, consists of large, green sand-layers, which rise flat above the salt loams, and scattered with high, quick-sand hills, like little mountains.

Though this sand seems very unfavourable to the growth of vegetables, yet the plains are full of green, juicy, and fine plants, the cause of which is the
wonderful

wonderful nature of this district, being so full of salt-springs. By digging, the Kalmucks have found large water-pits. This sandy desert has some rare and curious plants. The high, quicksand hills are full of *elymus*, *arundo*, *et carex arenaria*. Instead of trees, nature has provided these sand heaps with bushes. Among them is the most rare, wonderful, and leafless long, thin-limbed *Calligonum polygonoides* (*), which has

* This rare plant was quite unknown to me, till, in my journey, I met accidentally with Tournefort's Voyage au Levant, where it is described, Part. II. p. 147, and tolerably well represented by the name of Polygonoides Orientale Ephedra facie. It is to this first, original passage, I am indebted for my knowledge of this curiosity, which I could never have guessed at, by the description given, with an improper, distinctive mark in Gener. plant. of Linnaeus, who calls this bush of Tournefort, Calligonum polygonoides. I therefore described it before, by the name of Pterecoccus. See the plate given, Anas merfa, &c. p. 6, vol. iii. Linnaeus ranges it in his 13th class. The bush properly blooms about the middle of May. The fruit is large and beautiful, has green, yellow, or handsome red-shaded wings, and the same taste as the branches of the plant; if chewed, something like that of sourish apples. For this reason the Kalmucks burn the branches when dry, and consider the smoke as beneficial to the eyes. The representation given by Tournefort in his Corollarium, is quite false.

no where been discovered except by me here, upon some sand-mountains on the Southern Wolga, and about the mouth of the river Kama, and by *Tournefort*, at the bottom of Mount Ararat. It had now, on all it's branches, full grown-fruit, which gave a beautiful appearance to the bush, seemingly created for a sandy soil, and whose roots extend often to the depth of many fathoms. As abundantly grew here the *Artemisia santonicum*, with thick and woody stalks, which rise in autumn to the height of several fathoms. Here grows also the *Prenanthes Chondrilloides*, changed into a bush.

The oldest and best water-pits, in the vallies between the hills, are sometimes delightfully shaded with fine narrow-leaved willows, and the wild olive-tree (*Elagnus*), or small, white poplar-bushes, whereof the former become often fine and tall trees.

The plants that cloath this sandy desert are many, "but not being entertaining to a general reader, I will not enumerate them." Of animals, this district abounds with wolves, foxes, antelopes, and in reedy vallies, wild boars, little titmice, and race-hares. Of birds, none (except near some springs and salt-marshes) but the Bergander, common small larks, large black ones, sparrows in great numbers, and step-hawks (*Falco lanarius*), which build their nests on low trees in the vallies. I met with but few serpents, except the
lizard

lizard-serpent, in low, grassy vallies (*Lacerta apoda*), and still fewer vipers.

We were several days travelling in this desert, encamping on it every night. One day we met with some pretty partridges, with long, pointed wings; they have uncommonly short feet, and fly almost like pigeons; as they drink often, they are seldom seen far from the water-pits, and when these are dried up, they retire about the Southern Wolga. Their food is the seeds of the *Astragalus cicer* & *alopecuroides*, but in autumn the salt-plants. They generally fly single, and in pairs, but, in autumn, in whole coveys. When they soar, they squeak, but fly without noise. Their flesh is good, but tough. They probably came from more Southern districts, because they had but just began to breed, laying large white-eggs, like pullets eggs.

On this desert is a mountain of rock-salt, discovered by the Kalmucks many years since. I went to see it. It is about six miles in circumference, and divided by a salt-valley, making various windings, beset on each side with stony hills. In a salt spot in this valley, Mr. *Gmelin*, when he was here, dug a trying pit, and found the rock-salt pure as chrystal, and reaching quite to the day or surface of the ground. It cannot be ascertained how far the salt penetrates into the mountain, but there is no doubt of its advancing a great way.

Our

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KUNDERAU TARTARS

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Dr. Fischer, Sept.

Dr. Fischer, Sept.

Our journey, on this scorching, sandy step, took us ten days, and having nothing to drink but the water we carried with us, which became foul in the vessels, and absolutely stunk, I scarce know how to express the pleasure we enjoyed at reaching a river on the further side of the step, where we hung over the stream, men and horses, for a considerable time. On the road I had the pleasure of being an eye witness of the gipsy, or Egyptian-like way of living of a tribe of Tartars of Cuban extraction. They have about one thousand tents, and have at present obtained permission to travel with their flocks along the river Ach-tuba, from Tschigit to near the sea-side; they call themselves *Kundurau*, and are, like most Cuban Tartars, what the ancient geographers call *Hamaxobites*,

Campestres—Scythæ

Quorum plaustra vagos rite trabunt domos.

Horace.

We saw three of their wandering tribes. Their jurts or tents are in form and structure different from those of the Kalmucks, and other Nomades. They cannot be taken to pieces, "being so interwoven with bushes," but being of much lighter structure, "and scarce twelve feet in diameter," can be put upon a large cart. The round wall of such a tent is a lattice-work of very slender rods, and the roof a flatted vault of bent rods, one end of which is fastened to the lattice-work, and the other to a hoop that forms the smoke-hole, resembling

fembling our chicken-rips. The walls of this tent are covered with a reed-mat, and over the whole a light felt; so that this covering needs not to be removed. In order to transport these tents, they put them on a cart, with two high wheels, so as that the wheels are within the tent; on which they also load their timber, furniture, women and children, and thus wheel off all together. Rich men have two, or more, such tents, and carts, according to the number of their families; and they have also another cart covered, in which they sleep, with their wives. If they do not remain for a length of time in one place, they do not remove their tents from the cart, but sit underneath it, and perform their work in the shade of it; and, to prevent their young cattle from doing the same, they hurdle it in; but if they wish to make some stay, they unload their carts, and hang in the smoke-hole, on the windward side, a felt, embroidered with the needle in coloured worsted, partly to prevent the smoke's beating down into the tent, and partly by way of ornament. Their appearance is wild, and many of them are soon smoke-dried, and so much scorched with the sun, that they look like Indians. Their women, however, when young, are pretty. In horned cattle they are rich; "they ride them in preference to horses;" and draw their carts by two or three oxen, yoked in shafts, one before the other. They formerly paid a small, annual tribute to the khan of the Kalmucks, in cattle, butter, and other provisions; but are now free from

from every tax, and yet are continually robbing the Russian inhabitants and travellers. "In manners, dress, way of living, &c. they are like the Baskirians." Those who cannot afford to keep cattle, maintain themselves by following the trades of shoemaking, tanning, and other handicrafts; whilst some alleviate their poverty, by sheep-stealing, and other kinds of rapine, which they exercise to advantage among their neighbours, and the nearer hordes.

At Selitrenoi-gorodok, on the river Achtuba, are the remains of two magnificent buildings, the most splendid of which has been cleared from the rubbish, in which it was buried, partly for the salt-petre found therein, and with which the salt-petre-works adjoining are supplied, and partly with the view of finding hidden treasures. The extent of this heap of rubbish, which marks the extent of the ancient, Nogayan city, which here stood, is a mile and an half. The other ruin, is supposed to have been some mansion, from the many little divisions of rooms in it. The former, from which has been dug out many valuable things, and coffins plated with silver, seems to have been the mausoleum of some khans, and a temple. The whole appears to have been erected in form of a long quadrangle, from N. N. E. to S. S. W. and is about 12 fathoms long; and, on the south front, $9\frac{1}{2}$ fathoms broad. I remarked a judicious proportion in the divisions, and the burial-vaults under the northern one;

but

but the more southern front, whose foundation-walls are still the highest, and are now 14 feet above-ground, and have their foundations three-quarters of a yard thick, was embellished with Gothic pillars and arches, the remains of which are still to be seen. Throughout all the remaining buildings, reigns a most regular magnificence; of which I never saw an instance in any Tartarean ruins. The outside of the wall is not only ornamented with colours of green, yellow, white and blue, in triangular forms; but, in the chief points of the building, are the remains of Gothic carving, and Mosaic workmanship. Time, however, and the covetousness of the people, have many years since converted these relicks of antiquity, into heaps of stone and rubbish. Formerly, they loaded whole vessels with the bricks and tiles of these ruins, and conveyed them to Astrachan; and, in so doing, for every 100 bricks they took away; they reduced, at least, 2000 into useless rubbish. It is reported, that many coins, and valuable jewels, have been here found; but I doubt whether any of these objects have fallen into the hands of real amateurs; or into that treasure of inland antiquities which the Academy of Sciences at Petersburg has established.

A quarter of a mile to the north of this place, is a large tumulus that has been dug into; and to which the Kundurau, and other Tartars, when in this neighbourhood, come and say their prayers on it; from an opinion,

opinion, that a faint of their religion (Mahomedan) was here buried. The Tartars assert, that this faint still performs miracles, cures the sick, and sometimes appears to them in their sleep; the effect of a weak imagination, among many other people in un-enlightened ages.

Not being more than about 65 miles from Astrachan, I resolved to visit that place, accordingly paid off my escort, and set off on the 10th of June, with post-horses. The road to that place is bad and difficult, owing to the number of quicksand-hills we are obliged to pass. The next station (eight miles) is Krugloi-gorodok, or Dshamjanowa; so called from the Kalmuck prince Dshamjanowa, who lately died here in a fine wood-built palace, with a chapel and adjoining stables, erected for him at the expence of the Empress; and whose widow and successors still reside in it, attended with a life-guard of Cossacks. This whole district is rich in salt-petre; but I shall not say more on that subject, it having been long since described by preceding travellers.

I remained in Astrachan till the 10th of June, and took leave of Professor *Gmelin*, who was preparing to take his second tour into Persia, which ended so fatally to him. He was seized by a Tartar prince and confined, under an idea that many Tartars were slaves in Russia, in which confinement he died. In my way back,

I passed through the fortrefs Jenataeffkoi, or Schina Balgasun (the new city), situate on an arm of the Wolga, 100 miles from Astrachan. It is a place badly peopled, being inhabited only by eight merchants, some reformed soldiers, Cossacks, and a few private persons. It is a quadrangle, with good earth-walls, and four bastions. Within the fort are only Imperial buildings, a house for the governor, a mansion formerly designed for the khan of the Kalmucks, and a house for the *Pristaf*, or chief officer of the Kalmuck hordes. The mansion of the khan is now inhabited by a Kalmuck prince, of Torgutian extraction, who has been baptized by the name of Alexei Dondukof, was brought up among the Imperial cadets at Petersburg, and is advanced to the rank of colonel.

Near Zarizyn (the environs of which are become famous by the last and total overthrow of the traitor Pugatschef, and his wretched followers, in August, 1774), is a kind of loam, which seems to be fit for potter's work, and becomes, in calcining, almost as red and tender as the Chinese sealing-wax. Some Turkish prisoners at Zarizyn, make of it a variety of little vessels, ink-stands, tobacco-pipe-bowls, &c. Many pieces of selenites are found in the same loam.

Colony of Sarepta. Within 30 miles of this place, on the brook Sarpa, is a fine colony of Moravian brethren, established within these eight years, and called,
by

by the founders, *Sarepta*. It was erected in the year 1765, and has been endowed, by the Empress, with many distinguished privileges. It was begun by five of the brethren, deputed by the rest to make choice of a proper spot, and to mark out the scite of the chief house. Since this time it has been annually increased by families of the *Unitas Fratrum*, who voluntarily came here, as colonists from Germany and Holland; so that now, in 1773, it amounts to 250 persons of both sexes, and is yearly increasing by new comers. The place is not yet finished, according to the plan laid down; yet consists of a considerable number of well-built houses, some of wood, and some of birch.

The largest and finest building, is a new stone-built chapel, consisting of two stories, and a turret, with a clock. Near it stands two large edifices; one occupied by the unmarried brethren, and the other by the virgin sisters. They are all obliged to maintain themselves by their own labour; and, every week, to deposit a certain product of their labour, in the hands of their superior. These cannot marry, without the consent of their superior; who seldom grants them this liberty, till they are advanced in life. Among the brethren in the former house, are a number of good artisans, as taylor, shoemakers, stocking-weavers, tanners, upholsterers, blacksmiths, bakers, skinners, silversmiths, &c. also, a manufactory, where they make half-silks, cotton, and coloured linens, stuffs and handkerchiefs,

and all of quality; but, according to the custom of all Moravian establishments, they ask a high price for their goods. Young women earn their living by needlework, spinning cotton, bleaching and knitting. Both buildings have considerable out-houses belonging to them, for the various purposes of household business, stables, cow-houses, &c.

The other public buildings are, an inn, with a brandy-distillery, a tallow-chandlery, a soap-manufactory, a place to make snuff and tobacco, a dispensatory, with a saw-mill, a corn-mill, &c. for which the Sarpa is dammed up. There are no more than ten principal houses, to each of which is a small kitchen-garden; and one house for the physician of the colony. Without the place, along the Sarpa, are several plantations of tobacco, which turn out very profitably.

The town is fortified by a rampart, ditch, and chevaux-de-frize, with six batteries, of two pieces of artillery each; and it is otherwise fortified by nature. A small garrison of soldiers is quartered here in barracks, and relieved from Zarizyn.

Contiguous to the colony, they have established a farm on an elevated plain, where they breed a great quantity of cattle; and, close behind this, is a plentiful spring of water, which, by pipes, supplies the
town:

town: a village is likewise begun in the neighbourhood. The soil is a sandy one, and, to all appearance, no plant can be cultivated to so much advantage, as flax. The colony has a share in the fisheries of the Wolga; and the Sarpa supplies it with plenty of common fish. The spring-season yields them river-game in abundance; and winter, a number of hares and partridges. In 1774, this colony had the misfortune to be plundered by the Besarabian Tartars, who inhabit the step of Kuman; and the people thus lost great part of their property; but the Empress has determined to repair their loss, and protect them in future.

All the buildings here have been erected at the expence of the community, and out of the general fund; and the proprietors of the house pay a yearly rent of six *per cent.*; and, as the principal fund consists of a capital of 40,000 rubles, advanced by the Crown, without interest, for ten years, these annual rents will nearly, in the said ten years, repay the sum advanced. At the end of 30 years, they are to pay a quit-rent of 25 copecs for every desettine of land assigned them, of which they have about 4,000; each desettine, 560 English feet long by 280 wide; so that the whole will amount to no more than 1,000 rubles, or 250*l.* sterling. Such of the colonists as wish to return to their own country, before the expiration of the said ten years, are obliged to re-imburse the sum of 32 rubles

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each,

each, which the Crown advanced them for their journey here. After the ten years, this 32 rubles is considered as a present to them.

Besides these advantages, the colony of Sarepta enjoys, beyond all other German colonies established in this empire, the privilege of holding immediately of the chancery-wards at Petersburg, without being dependent on any other province. To promote internal harmony, and order, they have chosen presidents from among themselves, and allowed them a handsome stipend. Their priest has the title of a bishop; and the physician, and other officers, have annual salaries, from the general fund. They have, likewise, a male and female warden, to preside over the choirs of the unmarried brethren and sisters, and maintain that strict discipline, for which the sect is characterised. To these overseers are given a certain number of assessors, selected from their own body, who are called counsellors; these, with the pastors, administrator, and warden of the bachelors, compose an assembly, called, *the college of wardens*; whose office it is to attend the temporal interests of the community, to decide disputes, and inflict ecclesiastical discipline; in short, they have a power, subject to very few limitations. Besides this, they have a secondary council, called, *the assisting conference*, before whom matters are brought, prior to their being laid before the college. Lastly, there is also an assembly of grown-up men, that have been admitted
to

to the communion, and called, *the great common-council*. These assemble once a month, when every one is at liberty to propose what he pleases; and all is determined by a plurality of voices. Nothing can be altered that is once established, but with the concurrence of this other house; and the overseers, or wardens, are obliged to give an account of their administration, to the great council, at the end of every year.

I mention these things, only for the information of those readers who are unacquainted with the regulations of this sect of people, made by *Crantz*; and to amuse them further, I will add a short account of their several spiritual meetings.

The settled order of their religious assemblies is never interrupted, or changed, unless for very cogent reasons. They are sometimes held in public, with the doors open to every comer; and sometimes in private, for the communicants, or for the choirs of unmarried brethren, or sisters. This private meeting is stiled, *the congregation of the choirs*. By an established order, two assemblies are held every week-day; and three, or even four, on Sundays. In winter, the week-day assemblies do not commence till seven in the evening; and when it is public, it is called, *the hour of lecture*, because they then read aloud some chapters from the bible, or a sermon. Sometimes, also, the minister

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preaches,

preaches, particularly on Wednesday, and sometimes on Friday. But this assembly is not always general; for twice a week, and, at certain times, thrice a week, the fraternity of the holy supper hold their assemblies of devotion, in which a hymn is constantly sung. At times, likewise, any accounts particularly interesting, that may have been received from the brethren spread abroad in other countries, are read aloud. In summer-time, this first assembly is transferred to eight in the morning; but the second, is always at nine in the evening, and is called, *the hour of singing*, because verses from sacred canticles are sung. The Sunday assemblies have their order: namely, the litanies at eight in the morning; that is to say, one public and solemn prayer, at ten a sermon, and at eight in the evening another sermon, called, *the hour of commons*.

The Lord's Supper is celebrated every four weeks, and is preceded by a special and very rigid confession, and subsequent absolution. This private confession, is termed, *the speaking*; and is heard by the administrator in each of the choirs, who exercises, in this office, the utmost of his authority. All the communicants receive the sacrament at the same time; and the administering ecclesiastics, who are chosen for every assembly, by the bishop, from the administrators and wardens, are then clothed in white surplices, whereas, at other acts of devotion, they preach in a secular habit of any colour, sitting at a table.

What

What is called, *the congregation of choirs* (for the men and women are divided into different choirs), is their hours of prayer, or the extraordinary prayers of the unmarried brethren and sisters. This is held at the discretion of either division; or as the administrator directs. The signal for these private assemblies, is made by the sound of a horn, or trumpet; whereas, that of public assemblies, is, by tolling a bell.

Besides these meetings, they have another, called, *a love feast*. At these times, they meet in the hall, that serves for a church, and are presented with white bread and tea, the distribution of which is accompanied by musick, and spiritual songs. Exclusion from these *agapæ*, is looked on as the second degree of ecclesiastical punishment, and is commonly preceded by a prohibition from the communion, on the eve of which sacrament they are held; as, also, on those of the principal feast-days. In these baptisms they use no exorcism. The child is brought to the font, god-fathers and god-mothers answer for it, as in other churches, and the infant is sprinkled three times on the breast. Who would not suppose that these repeated exercises of piety, should enable a man to conquer his passions, destroy every vicious affection of the heart, and render the members of such a society, patterns of true and exemplary holiness! Yet they often give way to human frailties, corrupt manners are but too visible among them; and the excellent rules of this sect are always the most favourable side, in which it can be viewed.

The burial of their dead is attended by no ceremonial rites: no sighs, no complaints are to be heard, nor any mourning seen; on the contrary, they dress themselves with more than ordinary care on these occasions, to indicate the satisfaction they have, that another person has run his career of duty, and is gone to lay hold of the crown of everlasting life. Early in the morning, on Easter-day, the whole community meets in the church-yard, and celebrates an office, in honour of the resurrection.

The Caspian sea. On the left, or western side of the river Sarpa, there extends to the southward, into the step, a ridge of ground, describing a number of bays and promontories, and which, seen from below, has the appearance of a chain of hills, when, in fact, it is no more than the slope of a country very much elevated. This high bank extends from Sarepta, along the Wolga, and thence towards the north, as far as the middle Elshenka, which runs nine miles, above the colony, into the above river. Now, this sudden elevation of ground, the bay and creeks which it forms, and especially the saline quality of the low loam-step below, whose surface is mixed with vast quantities of muscle-shells, gives birth to the most probable, geographical conjectures, not only about the antient state of the Kuman, the Kalmuck and Jaikian steps, which are so thoroughly like each other, but also, concerning the extent of the Caspian sea, in the remote ages of the world;

world; and on the communication it may have had with the Euxine sea: conjectures which coincide with the opinion of M. *Tournefort*, who has been ever acknowledged an accurate observer, though he might advance and say a great deal, with great appearance of truth, on the ancient separation of the Euxine from the Mediterranean; on the rise of the waters of the former above the level of the latter, and of the influx of this water into the Mediterranean; probably in the deluge of Deucalion.

That multitude of shells scattered over all the steps of the Jaik, the Wolga, and the Kalmucks; shells similar, in all respects, to those found in the Caspian sea, and never met with in rivers; that uniformity of soil, in all parts of these steps; consisting of nothing else (except in places covered with a flying sand) than a pure sand, connected with such slime as is found at the bottom of the sea, or a yellowish clay, without the smallest appearance of turf, or any layers of mineral earth, till we come to a bed of clay, at a very considerable depth; that general, saline quality of the soil; the innumerable flats, and lakes of salt-water; and, above all, that continued equality of country, in all these vast deserts, are so many incontestible proofs, that they must have been covered formerly by the waters of the Caspian sea; and, though these plains have been forsaken by the sea, for a great number of ages, yet, whether by the effect of the aridity of a hot climate,
whether

whether in consequence of the saltiness inherent to them, and maintained by the clayey nature of the inferior stratum; in short, whether by an effect of that property, they have only produced plants, requiring a saline earth and water, and which, by their decay, make but little earth, and a great deal of salt; from whatever cause it be, yet these plains have never hitherto been clothed with vegetable earth, or turf; or by any kind of wood whatever.

It is then plain, that the elevated ground, between the Don and Wolga, as well as the high lands between the Wolga and the Jaik, have been the ancient banks of the Hyrcanian sea; for it is in these high lands, that the disposition of the earth, in strata, is first discovered, that the general saltiness of the ground first disappears, that its surface is covered with black mould and turf, and that the marine productions peculiar to the Caspian sea, are no where to be met with; and if we meet with whole banks of shells and corals higher up the Wolga, where the lands begin to be more mountainous, they must necessarily arise from an inundation of the globe, so much the larger, and the more remote, as all the marine productions contained in these layers, are of a nature not to be found, either in the Caspian sea, or in the Euxine; but only in the depths of the ocean.

After saying thus much, it may naturally be asked, how the Caspian sea, which acquires, from the rivers

constantly running into it, as much water as it is supposed to lose by evaporation, for no sensible reflux has been observed in it for many years; how this sea could have lost, at one time, so great a body of water, as to leave dry a space of country, doubtless more than 15 fathoms higher than the actual bed of that sea, and of so vast an extent as the plains of the deserts from the Lower Don to the Jaik, thence to Lake Aral, and behind this lake to the Uralian mountains, which are a southern prolongation of the Moguldsharian mountains? If we admit *Tournefort's* supposition, which he has rendered probable, namely, that the mountains of the Thracian Bosphorus were in perfect contact, and formed a boundary, which divided the Euxine from the Mediterranean; so that the former, which received into it such great rivers, as the Danube, the Dniester, the Don, and the Kuban, was an immense lake, whose level was above that of the Mediterranean sea, or the ocean; but by a rupture of this mighty dam, occasioned either by the successive action of the waters, or by an earthquake, the waters of the Euxine, rushed into the Mediterranean sea, to gain its level; and that the first influx of this enormous torrent, was the reason of these inundations; which, according to the most ancient records of history, deluged a part of Greece, and the isles of the Archipelago; we shall be able not only to account for this diminution of the Caspian sea, but the visible traces that still subsist of the ancient elevation of the Caspian, will corroborate the opinion of *Tournefort*.

It

It appears, that the eastern step, which shews the traces of the retiring of the Caspian sea, has an open communication, by low districts, with the Crimean step, and others, situated towards the Black Sea ; which steps, as far as I could learn, are of the same nature with this eastern step. And hence, if the level of the Black Sea was many fathoms higher, before the waters burst through the channel of Constantinople, than at present, to which, perhaps, the rivers which flowed in those times, from wild, woody, and moister districts, might have much contributed ; it is a plain probability, that the steps of the Crimea, Kuman, Wolga and Jaik, and the low countries of Great Tartary, till we pass the lake Aral, has been one common sea, which, by a narrow and shallow streight, whose marks the river Manytsch exhibits, flowed round the northern angle of Mount Caucasus, and formed, by the present Caspian and Black Seas, two vast deep bays. At this time, the sea-dogs, the several species of sturgeon, and other fishes of the Black Sea, the *atherina*, the *syngnathus pelagicus*, and the shells called combs, might have been carried into the Caspian sea ; which, by its actual situation, is too remote from all other seas, to permit us to suppose, that these different, living animals could have come from them.

That as soon as the Black Sea could discharge itself, through the Propontis into the Mediterranean, the first fall of its level converted a great part of the flat and shallow

shallow sides into salt deserts: and the Caspian sea having been joined by the Euxine, or Black Sea, by a shallow freight, was, in a little time, detached from it; the level of the Euxine being much more lower than the bottom of that straight, and, of course, the Caspian sea must have then become a lake, confined within the land; but as it did not receive such an acquisition of water, as the Black Sea, by not having so many and such large rivers emptying into it*, and as, for want of communication with the Euxine, it received none of its waters, this, with the natural evaporation, must contract the waters of the Caspian, and leave more land bare; and it was at this time, perhaps, that the communication it had with the lake Aral ceased. The sand-banks which the waters had left, now changing into quicksands, which by the wind accumulated into such hills as are met with in the sandy deserts of Naryn, and the Wolga; old islands appearing in the dried bottom of the sea, as so many little mountains; such, for example, as are those of Indeskoi, and others, and many depressions of the lands, after the sea had left the level ground, remaining as lakes, or salt-pits, many of which are to be seen upon the steps; are all corroborating arguments of the visible decline of the Caspian sea.

* *The rapidity of the current, in the channel of Constantinople, towards Archipelago, seems to prove, that the Black Sea receives more water from the rivers that flow into it, than it loses by evaporation.*

In vain is the objection, that travellers relate what they have observed near Baku; that the sea gained upon the land, and had already swallowed up part of the town; for if we consider the phlogistic nature of the soil in those parts, we shall find infinitely greater reason for admitting a sinking of the earth, and of the mountain, than an increase of the sea, which could not any way be the case; whilst, on the contrary, a bare inspection of all the countries that surround the northern part of the Caspian sea, leaves no room for doubting that it has undergone a diminution, much more considerable than the Mediterranean, or any other known sea; nay, it is highly presumable, that it is still decreasing every day. But even without supposing, as we do, that the Euxine sea was never separated from the Mediterranean, might we not, from the diminution merely, which every sea experiences in its waters, attribute the separation of the Caspian sea from the Euxine, and from the lake Aral, as well as the drying-up of the straight of communication; and may we not conceive, that this communication once stopped, the sole disproportion between the body of waters that entered the Caspian, by the rivers that run into it, and what it lost by evaporation, might produce the same effect, and sink its level much beneath the general plane of the seas?

In the extracts of *Stritter*, from Byzantine authors, I find a passage, which would make it credible, that the
low

low lands, or depressions, at the northern bottom of Mount Caucasus, through which, according to my opinion, both the Euxine and Caspian joined, were not quite dry, between the fourth and fifth century, *Priscus*, who was accompanying an embassy sent by *Theodosius II.* emperor of the East, in 449, to *Attila*, king of the Huns, relates *, from the mouth of a deputy sent from the emperor of the West, whom he met with in his road, that which the Scythians and Huns used to take, when they made their inroads into Persia; “that they travelled part through a waste country, or “step; then crossed a marsh (which the Roman has “undoubtedly confounded with that of the *Mæotis*); “then went over a mountain, which was to be traversed as far as into Media.” But let this be mentioned only as an accidental, doubtful conjecture; the natural marks of the decrease of the Caspian, are more infallible.

On the 26th of June I went to Tzaratzin, or Zarizyn. Here I met Mr. *Bykof*, whom I had sent, in winter, from Siberia to the Wolga, and who had spent his spring usefully, in collecting remarkable plants and insects. Mr. *Sokolof*, who came here with Mr. *Bykof*,

* [*Memoriæ populorum olim ad Danubium, Pontum Euxinum, Paludem Mæotidem, Caucasum, mare Caspium, cet. incolentium é scriptoribus historiæ Byzantinæ erutæ et digestæ.* a J. G. Strittero, tom. I. p. 513.

in the beginning of spring, made a tour up the Sarpa, through the Kumanian step, and was not yet returned. Mr. *Kashkerof*, who had gone by water on the Kama, arrived here with the waggons just before me.

I chose this place for my autumn abode; as this district affords many observations in natural history. The remainder of this month, and the next, I was busy, in the vicinage of the Don and Wolga, among the Kalmucks, which gave me an opportunity to examine my account of that nation, and set it to rights. At the end of July, Mr. *Sokolof* joined me, who, during his spring-tour, through the Kumanian step, came, not without danger, to the Cossack town Mosdak, situate at the bottom of Mount Caucasus, and from thence thro' Kirlac to Astrachan, and so to Zarizyn.

There is nothing remarkable in the Kumanian step, which Mr. *Sokolof* travelled over, but Mount Caucasus, on one of its borders, whose snow-clad summit was wrapped in the clouds, and which begins to rise on the opposite bank of the river Terch; and the ruins of a considerable city, situate in the very angle, formed by the lake Baibalinsky, with the river Kuma, and well known in the regency of Astrachan, by the name of Madshar; a proof that this district once was well peopled, and deserves population now, being a warm climate, and favourable for every sort of culture. I had requested Mr. *Sokolof* to visit, and describe particularly,

ticularly, the above-mentioned ruins, which the Kalmucks call Zaghan Balgasun (white town), and also, Madsharan-ka-Balgasun (the fine city of Madshar); and illustrate, with many fables of their own invention: but the escort which attended him from Zarizyn, was so small, and the danger of vagabond parties of Tartars, so great, at this time, in the district of Madshar, that he was as much afraid to approach them, as the Cossacks that escorted him.

“ This city is thought to have been the residence of
 “ *Achmet*, king of Grand Tartary, or the capital of
 “ the Golden Horde, and was called, by the Russians,
 “ *Tzarevi Podi*: but there are no remains of any con-
 “ siderable edifice to be found entire, the whole being a
 “ heap of ruins. Here and there we met with several
 “ kurzans, or elevated tombs, built with brick; and,
 “ by the side of a fresh water-lake, at the foot of a hill,
 “ is a place where the wife of some king is said for-
 “ merly to have resided. On the summit of the highest
 “ hill in all that country, they shew you the spot
 “ whereon, they say, the palace of their kings stood;
 “ which the vast extent of its ruins, and the great cir-
 “ cuit of its court-yards, as well as the delightfulness
 “ of the situation, seem to confirm. The ruins of
 “ this antient residence, extend to the length of no less
 “ than 29 miles, taking in all along the edge of the
 “ step; whilst, in breadth, they are only three-quar-
 “ ters of a mile. The Tartars, however, relate, that

“ as they proceed in the step of the Jaik, to the river
“ of that name, they meet with numberless other ruins
“ of small edifices, built of brick. We know, from
“ history, that this capital of Grand Tartary, was de-
“ stroyed, in 1462, by the great-duke *Ivan Vassillie-*
“ *vitsh*, grandfather of the Czar of that name; and that,
“ some years afterwards, it was razed to the very foun-
“ dations, by the Nogayan Tartars. In these ruins, we
“ can scarce pass ten steps, without stirring up a ser-
“ pent; indeed, they are general all over this district,
“ whose soil is salt and nitrous. Their hissings are
“ heard all round; but they are only harmless snakes,
“ and the black, aquatic serpents.

“ Whilst I am on the subject of Mount Caucasus,
“ I will say something, from the authorities of Messrs.
“ *Schloetzer* and *Guldenstadt*, of the settlements about
“ this chain of mountains, which fills the space between
“ the Caspian and the Euxine seas, extending from the
“ west, eastwards; bordering on Persia, to the south, and
“ on Russia, to the north. It is a territory which the
“ Russians are now contending with the Turks for;
“ and contains a greater diversity of nations and lan-
“ guages than any other country, of the same extent,
“ in the world. Here are Greeks, whose ancestors
“ have dwelt here from the earliest periods of history;
“ here are the descendants of those Genoese who held
“ possessions, with so much authority, on the shores of
“ the Euxine, about the 13th century: and here are
“ also, Moravians, Persians, and various colonies of
“ Tartars.

“ According to the geographical description of these
“ countries, Georgia, and its provinces, occupies the
“ southern side of Mount Caucasus, the Kabardines
“ (among whom the Tscherrkessians, commonly called
“ the Circassians, are a part) the southern, the Leguistans
“ and Troughmenians the eastern, and the mountaineers
“ in subjection to Turkey, the western side, that is to-
“ wards the Euxine, or Black Sea, called the Crimea.
“ According to my general plan, no notice should be
“ taken of countries not under the protection of Russia;
“ but as they lie so contiguous, and the Russians
“ claim this territory, it may not be improper to
“ say something of it.

“ The Troughmenians are the antient Turcomans,
“ and occupy the eastern part of the south side of
“ Caucasus, from the western shore of the Caspian sea,
“ as far as the province of Kaghettia in Georgia. Se-
“ veral of them have their particular princes; and
“ others are in subjection to their neighbours.

“ This tribe is unmixed; the people from whom
“ they sprung, wander still about, in their ancient
“ country, on the eastern shore of the Caspian; their
“ possessions extending to the lake Aral, and touching
“ the frontiers of Persia on the south. It is now above
“ 40 years since the hordes of this nation fell under the

“ Kalmucks of Ayouh, and being then out of humour
“ with the Persians, in 1743, they determined to put
“ themselves under the protection of Russia, to the
“ number of 30,000 families; but the Persian Schah
“ prevented them: however, a considerable number
“ joined themselves to the Tartars of Orenburgh, Ufa
“ and Astrachan; but, at the time, a party of the Kal-
“ muck horde, in 1770, fled into Dsungaria, the
“ Troughmenians of the river Ural obtained their
“ liberty by the sword, and are at present free subjects
“ of Russia, leading a retired life, about the mouth of
“ the Kuma. The reigning khans are brothers, and
“ saltans; that is, sons, and princes, of *Nour Hali*,
“ khan of the Kirguese.

“ In their figure they resemble the Tartars; are as
“ well made, polite and brave; acting, like the Swiss,
“ in time of war, and entering into the service of any
“ neighbour that will take them; and, as they ask no
“ leave, they often fight against each other.

“ In short, the people of Caucasus are but so many
“ different remains of many European and Asiatic
“ people, which, by a succession of many generations,
“ have acquired a great resemblance to each other, in
“ person, constitution and character, which border very
“ much on that of the Tartars, who predominate
“ among them, though they are, in many respects dis-
“ tinguishable. Generally speaking, the people of
“ Caucasus,

“ Caucasus, are large, well-made, not corpulent, of
“ a tawny complexion, strong features, small nose,
“ small eyes, and lively, thin eye-brows, and their hair
“ red or black. They are active, polished, bold and
“ resolute, voluptuous, very ostentatious in dress and
“ feasts, generous, and given to dissipation, through
“ pride; and, at the same time, severe, unjust, per-
“ fidious, and addicted to rapine and revenge.

“ They shew great attention to their women, who
“ are well-made, more frank and open, and more
“ agreeable than Tartar women in general. The Cir-
“ cassians enjoy, with justice a preference, their
“ beauty, vivacity, ease, and refinement of their
“ manners; and the justness of their taste, have
“ rendered them famous. Red hair is thought so
“ great a beauty, that such as are not so blessed,
“ colour their hair with red pomatum. The lan-
“ guages spoken here are as various as the people; and
“ we find some villages so insulated, as to have a
“ language of their own, not in the least understood
“ by those of the next village. These languages are,
“ however, so guttural, so harsh and dissonant, that
“ we have no letters to express the sounds by.

“ All the nations of Caucasus, together, may be able
“ to furnish 100,000 cavalry; notwithstanding, some
“ of them would find it difficult to raise 50 men to
“ march against an enemy. All these societies together

“ form a kind of irregular aristocracy, composed of
“ many smaller ones. Every chieftain looks on all the
“ males of his territory, capable of bearing arms, as
“ his soldiers ; each of whom is obliged to equip him-
“ self, and attend his chief when called on. Some of
“ these people scarce pay any tax, whilst others give a
“ fourth of what they possess ; a tenth is the usual tri-
“ bute, with a certain number of horses and cattle, ac-
“ cording to the circumstances of the possessor. Mer-
“ chants, and artisans, furnish different sorts of mer-
“ chandise, ammunition, &c. The administration of
“ justice is conducted in the Turkish manner ; an ar-
“ bitrary sentence is pronounced immediately, often
“ without enquiry, and sometimes without crime, or
“ any proportion to the fault.

“ Many of the Caucasians lead a wandering life ; but
“ the chief part live in villages of from 20 to 50
“ houses. Each village has a stone tower for defence,
“ in case of attack, in which women and children are
“ sheltered from the first assault. Their ordinary houses
“ are but poor, wooden huts ; and there are many fa-
“ milies that dwell in jurts, or tents, of white felt.
“ The mansions of their princes and nobility, are built
“ of wood, some few of stone, all of them badly built,
“ and badly furnished ; and surrounded by the tents
“ and huts of their domestics and attendants, sta-
“ bles, &c.

“ Agriculture

T A R T A R Y.

“ Agriculture and pasturage are their principal oc-
“ cupations, though several follow trades and com-
“ merce. Some have plantations of cotton, and
“ breed silk-worms. Vines grow on these mountains,
“ without culture; but they turn their grapes to no
“ account.

“ Cattle thrive abundantly with them; but their
“ flocks are not numerous, their villages being too
“ near each other. The horses of Caucasus are little
“ inferior to those of Arabia, and one, if properly
“ broke in, will fetch 100 ducats; for which reason,
“ princes and nobles have fine studs. They are taught
“ to understand and obey different words of com-
“ mand, to kneel down for the rider to mount, dis-
“ mount, &c.

“ Besides the common trades, these people are ex-
“ cellent workmen in iron. They make sabres, plain
“ and damasked, and angular poignards, for piercing
“ coats of mail at the joints, and to render the wounds
“ they give mortal, they make them of arsenical steel:
“ they make also all kinds of armour. They trade by
“ barter; but take the coin of every country by its
“ weight.

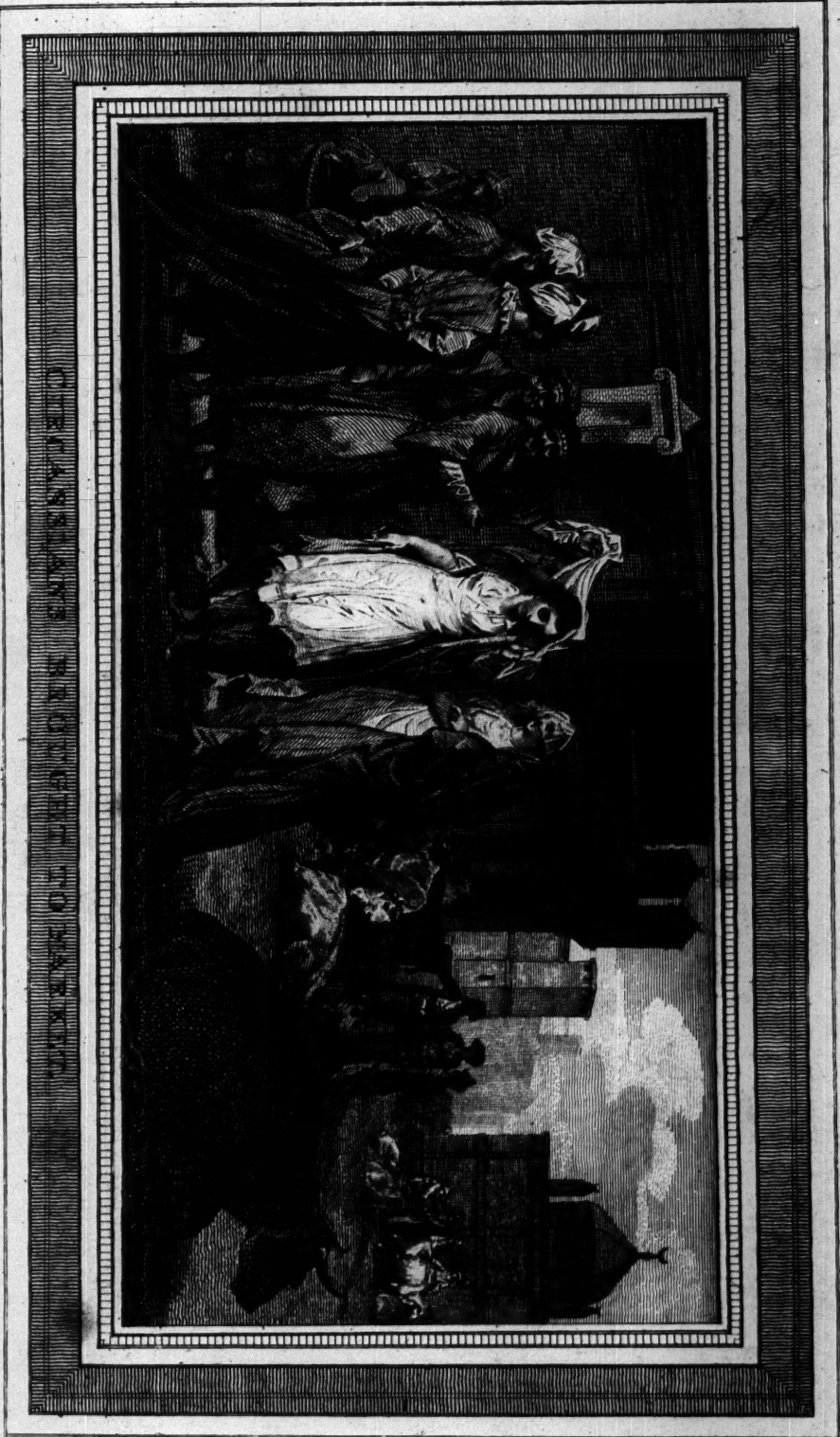
“ Some of these Circassians are so expert in stealing
“ cattle, and carrying off women, that they make a
“ trade of it. Their principal endeavours are directed
“ towards

“ towards carrying off beautiful virgins, or handsome
“ women. Such as they take, they keep as concu-
“ pines, or sell them to the Armenians, who supply the
“ Turkish harems, making them pass for christians,
“ in order to enhance their value. What has been pub-
“ lished on the subject, of this famous commerce with
“ the Circassian women, is undoubtedly exaggerated,
“ though the fact is true. They also carry their child-
“ ren to Kaffa market, with their cattle, where they
“ obtain 7,000 Turkish piastres for a young and hand-
“ some girl. *Kluman*, of Vienna, one of the latest tra-
“ vellers of credit, in his Voyage to the Crimea, asserts
“ the same thing. ‘ These female slaves, when
“ brought to market, are locked up in a small pri-
“ vate apartment. When there, says he, I was desirous
“ of seeing some, and spoke to the salesman, for that
“ purpose. One of them was, consequently, brought
“ out to me, into a room where I was waiting. She
“ was well-dressed, but her face was veiled; she kissed
“ my hand, agreeable to the eastern custom; and her
“ master ordered her to walk to and fro. She was ele-
“ gant to the extreme; when she unveiled her face, she
“ absolutely enchanted me, so inexpressible was her beau-
“ ty. Her hair was light, her eyes full and blue, her nose
“ a little long, her lips lovely, her features regular,
“ her complexion white and soft, and her cheeks tinged
“ with a fine carmine; she had a long neck, and a
“ fine bosom completed the charms of her person. She
“ was desired to wipe her face with a white handkerchief,
“ to

J. M. W. Turner del.

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A. Deland, sculp.



5 JA 53

‘ to shew me, her beauty was not owing to paint. She
 ‘ then shewed her teeth, which were white and regular.
 ‘ I was allowed to feel her pulse, in order to be con-
 ‘ vinced of her health. After this, she was ordered
 ‘ to withdraw. The Armenian, who had the disposal
 ‘ of her, assured me, she was 18 years old, and yet an
 ‘ unspotted virgin. Her price was 4,000 piaftres, or
 ‘ about 125*£*. English; which, he said, was the value
 ‘ of such a slave. Having viewed this girl, another
 ‘ was brought out to me, and underwent a similar ex-
 ‘ amination.’

“ It is easy to see, that none but the rich can make
 “ such purchases; so that these victims to voluptuous-
 “ ness, stand a fair chance of being better provided for,
 “ than they would have been at home. This kind of
 “ traffic appears shocking to those of refined senti-
 “ ments, who seek, in marriage, for a faithful and in-
 “ separable companion, the equal sharer of their good
 “ or bad fortune; but, in other societies, less civilized,
 “ we find they are considered in no other light, than
 “ as ministering to the pleasures of sense.

“ All the Kobardines, and Circassians of Caucasus,
 “ when well dressed, wear a shirt of fine linen, large
 “ trowsers, Morocco-leather boots, a long cassock, tied
 “ by a silk sash, and a long upper garment, of fine cloth,
 “ or silk, with open sleeves, in the eastern stile. They
 “ shave the head, and wear mustachios, and the beard
 “ pointed

“ pointed at the chin; the head covered with a scull-
“ cap, of some rich stuff, and over that a cap flattened
“ at top, and wider there than at bottom. They fel-
“ dom go abroad without a poignard, and a sabre; the
“ former in the fash, and the sabre in a leather belt.
“ The poor wear cloth, or cotton stuffs, of their own
“ making.

“ The female dress is a shift, trowsers, a vest, and a
“ gown, sometimes with sleeves, and sometimes with-
“ out. In winter, they put on furs, reaching to the
“ feet. They always wear ear-rings, and a necklace.
“ The head is covered with a tastar, or Tartarean
“ veil, which is brought over their faces, when they
“ go abroad.

“ They eat, like the Tartars, but their viands are
“ made more relishing. At meals, they sit on chairs,
“ round a table, are very fond of strong liquors, con-
“ fining the interdiction of the Prophet to wine alone,
“ for they are all Mahomedans. Their common
“ drink is mead, and a kind of English ale, brewed by
“ themselves.

“ Polygamy is allowed among them; the first
“ wife having many more privileges than the second,
“ or third: few, however, have more than one wife,
“ and she winks at her husband's intrigues. They
“ are too proud to confess that they purchase their
“ wives,

“ wives, but call the price paid, a nuptial present ;
“ which they will fix, however, with as much pre-
“ cision as a Tartar.

“ As to their funerals, they wrap up the dead in large
“ winding-sheets, and bury them without a coffin. In
“ different places, about Caucasus, we meet with epi-
“ taphs, crosses and inscriptions, which indicate them
“ to have been made by christians. Probably, these
“ are the remains of the Greek empire, when the seat
“ of it was at Byzantium ; or else of the colony of
“ Moravians, who quitted their country about the end
“ of the 15th century, to which they were exposed,
“ and sought an asylum here, though they are now en-
“ tirely degenerated, and mixed with others, preserving
“ only their name and language ; or, they may be
“ vestiges of the zeal of *Ivan Vassilievitch*, the great
“ Tzar of Russia, for the conversion of the Cau-
“ casians.”

“ As I shall, probably, have occasion to mention the
“ Circassians again, I will say no more of them here.

On the 4th of August, continues Dr. Pallas, I made
a tour up the Wolga, in order to visit the German co-
lonies ; and saw, on the heights, along the road, a great
number of water-melon gardens, in the open step, where
this fruit grows very large and fine, without watering.
The water-melons of Zarizyn, surpass almost those of
Astrachan.

Astrachan. The same high grounds, and many others, as far as Dubofka, are excellently situated for vineyards; and the garden of Colonel *Zipletof*, governor of Zarizyn, which has been made but four years, is a proof of it; as it yields, annually, near 20 puds of fine grapes.

This garden was planted on the spot where there was formerly a wild orchard, and is at present not only increased, but prodigiously improved. It contains various species of fruit-trees and vines, of Hungary and Astrachan. The upper corner of this garden exhibits a handsome flowers of Glauber's, which visibly spring from some invisible sources; and the adjacent heights have, perhaps, the same vitriol layers, as are observed upon the *Etshenka*.

This district, between the upper and lower *Metshetna*, near the *Wolga*, is remarkable for the remains of an old Tartarean city, which has been almost levelled with the ground. Among the ruins, are the foundation of a great, stone building, which has been either a caravanserai, or a mart. It is a large square, with several alleys, and divisions, like small chambers. Here are but few bricks among the rubbish, but great quantities of free-stone. It is said, that on the spot where the governor's villa stands, was originally a *metshed*; and that several valuable things, and some golden saddle-plates, were dug up in the foundations. Probably the

the whole has been a suburb of that Tartarean metropolis, whose remains are found a little lower down than Zarizyn, on the Achtuba.

At Dubofka, about 40 miles from the last place, is a fine stone-built, spacious mansion, erected in the Gothic taste, formerly belonging to *Ataman Porfizky*, who lived to the age of 120: he founded this town. The proprietor did not live till it was quite finished, and it now stands waste, his successors liking rather to live in their wooden dwellings. The Cossacks of Dubofka were selected, in the beginning of this century, from those about the Don. At first they consisted of 1,017 heads, but at present they are reduced to 500; yet have still their ataman-djak, starchines, and stanix-atamans. They possess a great deal of horned cattle, and a great extent of arable land along the Wolga; and trade much towards the Don, in boards, resin, brick, tar, timber, barges and waggons. They fix great vessels on rollers, and drag them to the place of sale, with 15 or 20 yoke of oxen. In summer-time, many of them will leave their town, and travel to the upper districts of the Wolga, through the Kama, with all sorts of materials for shipping, in order to sell them.

About 90 miles higher up, is the fortress Dmitrefs-kaja, or Kamyschenka, lying in the lower angle, which the brook Kamyschenka forms with the Wolga, in a
low

low and moist soil. The first fortress erected here, in the last century, had a far more healthy and advantageous situation; the remains of which are still to be seen, on a height in the neighbourhood. The present, new fortress is quite commanded by that height, and consists of a wooden wall and bastions, &c. The works enclose a stone-built cathedral, a well-built town-house, the governor's mansion, and some other dwellings of note. The city lies in length down the Wolga, in long, parallel streets, of which the principal one consists of of moveable shops, and extends from the fortress to the salt-magazines. This city has also two, wooden churches. The shop-keepers here sell a great deal of provisions, and waggoner's-tools, on account of the salt that is conveyed through this place. Formerly a great trade was carried on here, with the Kalmucks, and would be now, if that canal was made from this river to the Don, which *Peter the Great* planned. I found here Professor *Lowiz*, and his assistant, Mr. *Inochodzof*, employed in taking the level of the country, through which this road is to pass. It was begun in the reign of *Peter the Great*, by Captain *Perry*, an Englishman. The soft nature of the high grounds, which stand in the way, and the rivulets of *Ilowla*, to which this canal is to run, give the greatest hopes to the execution of this project.

In order to reach the river *Jeruslan*, or *Ulustan*, about 13 miles from the river *Targun*, we passed over the
step

step of Targun, which is arid and barren to the extreme. The slime which covers the soil, becomes fine dust in summer-time, rises in the air with the least wind, and is very troublesome to travellers; add to this, the whole district is very unsafe, on account of several gangs of Kirguese, who live by the plunder of incautious travellers that fall in their way. The Jeruslan runs parallel with the Wolga, a considerable way; but, where the road leaves it, there is a *umet*, or way-house, where they sell bread and hay, and where there is a bridge, if the water is high. It is just 75 miles from this place to Saratof, and as far to the lake. Some of our people carelessly let some fire drop on the step, which kindled the parched grass, and the fire spread with such rapidity and violence, as to become inextinguishable, and we had a great deal of trouble, as before, to bring off the waggons through the fire, which had made a circle round us; so that we were in danger of being burnt alive, or suffocated by the vapours and smoke; yet we saved every thing, and got off without any material damage.

Eleven miles from the Jeruslan, we pitched our tents on the side of a brook, and took up our lodging for the night, on the 12th of August. From the heights situated about this brook, we could descry, westward, the high mountains of Selotofsk, beyond the Wolga; and as, in this district, are situated the lowermost German colonies I intended to visit, we had these moun-

tains for our land-mark, it being 23 miles to the nearest colony, Kotschetnaja.

This village, consisting of 49 houses, mostly Roman-catholic families, from the bishopricks in Transylvania, belongs to the circle of Warenburg, well colonized, under the direction of one *Le Roi & Piſtet*. The above circle contains 16 colonies, planted along the Wolga; of which the lowermost lies six miles further down the said river, and at 60 miles distance from Saratof. They have taken Russian names, and the people speak the Russ language, with uncommon ease and purity. These 16 colonies consist of 874 families, or 3,850 persons, from almost all parts of Germany; and are of different, and partly of mixed religions. They have, amongst them, one Lutheran minister, and two Romish priests. The houses, throughout all the colonies, are wood, and built on a new plan, so as to unite two habitations under one roof. Each colonist has a good chamber, parlour and kitchen; and sometimes a little closet besides. These villages are situated along the Wolga low-grounds, which supply them with plenty of hay and wood; but they are too near each other, to afford them all a sufficient quantity of good, arable land; and though they are rapidly increasing, they cannot prosper well, unless some change is made, and they are separated farther from each other.

All round Saratof, to the distance of 50 or 60 miles, along the banks of the Wolga and Karaman, there are a number of colonies, either erected by the Empress herself, or by the agents of *Le Roi*, *Piſſet*, and the *Baron de Beauregard*, 85 in number, besides the 16 already mentioned; comprising 5,125 families, and 20,162 persons, of different countries, Germans, Dutch, French, &c. and different persuasions, with Lutheran and Romish clergy; all properly established, under certain chiefs and regulations.

Between Saratof and Astrachan, there are several more colonies, pretty near each other, in which are manufactories of cloth, linen and stuff. That of Rossoschi, consists only of French families, and belongs to 11 others, erected by Governor *Bosse*, and are immediately under the command of the Empress. The houses here are all built with stone; but the inhabitants are dull and slothful.

Here is also a Holstein colony; though most of the inhabitants come from the Rhenish countries. The Noah of these colonists, or the person who first introduced the plantation of vineyards, is one *John Philip Peiler*, from Messingen upon the Rhine; he has, in two gardens belonging to him, upwards of 2,000 bearing vines, which yielded him, last year, more than 20 puds of grapes. He does not water his vines, though they stand upon a very dry soil. It must be ascribed to

the saltness of the ground, that the grapes, though unlike those of Astrachan, in size, beauty and taste, yields far better juice, which, if suffered to stand long in casks, becomes a high, red, light wine, equal to some French wines, and a nectar compared with that of Astrachan.

That I might collect a proper account of these colonies, I went to the colony of Catherinestadt, and staid there a whole day. The plan of this place was projected for 300 families (though it has only 163, consisting of 615 people); the chief part of whom seem to be mechanics. Here is a fine Lutheran church, which has its own preacher; also, a Calvinist and Romish chapel, but they have no ministers appointed to them: to the latter, a priest came, occasionally, to say mass. The dwellings are all built of wood, in regular streets. No colony has better, mechanical professions than this, and some acquire a good living, by its being so near Saratof, from which it is distant 39 miles. It has at present an upholsterer, an able turner, some hatters, dyers, clothiers and weavers, carpenters, cutlers, locksmiths, and watch-makers; and some of more common trades, as taylors, shoe-makers, bakers, millers, butchers, &c. even some miners came here, but finding no employ, they are turned husbandmen. If there was more business for these people, Catherinestadt would soon be a substantial place. Formerly, the planting of tobacco was the best subsistence of the colonists; and the

the Kalmuck hordes, who used to pass this district in summer, purchased almost all they grew; but now this commerce is on the decline, though connoisseurs esteem the tobacco raised here, not inferior to that of Virginia. In the district of Catherinestadt, there were more than 20 desettines of land planted with tobacco. They attempted here to plant mulberry-trees, but the young plants were entirely devoured in winter by the hares. An attempt has also been made, with success, to make Dutch and Swiss cheese. But before I quit these colonies, I must mention a kind of vinegar, prepared by the inhabitants of Catherinestadt, from curds, for want of a stronger acid. They take, for this purpose, the curds of turned milk, put them into a little barrel, with the addition of leaven, or sour dough, or without, until they have finished their fermentation, when they yield a very strong and pleasant vinegar.

Saratof. From Catherinestadt I went, on the 15th, to Saratof, and arrived there on the 18th of August. This city was first situated on the left side of the Wolga, on the brook Saratofka, where the vestiges of it are to be seen. The present city was built about the end of the 16th century, and is now a considerable place, increased, within these ten years, by the establishment of the German colonies. It lies along the steep border of the Wolga, at the bottom of some high mountains, which form a chain along the Wolga, Ilawla, and Don. The place is divided by a deep cleft, and an

old wall, into city and suburbs. The low part of the city lies chiefly on level ground, has broad and regular streets, seven churches, one convent of friars, and another of nuns. Here is also a court of waywodes, a salt-office, a court of tuition which superintends the colonies, and a court of police.

The court of waywodes is a stone building; and, opposite to it, are several stone-built comptoirs. The city has many substantial inhabitants; and some lords of adjacent manors, have here some fine mansions. The great market is built of wood, and contains a great number of shops. Among the inhabitants are about 100 German citizens, some of very lucrative trades. Three miles from the city, one *Verdier* has an extensive mulberry-plantation, but his success in silk-worms has not been very considerable. Saratof receives great benefit from the ships that are here moored, laden with hides, tallow, fish, salt, and Persian goods, bound from Astrachan, and other lower districts, to the upper parts of the empire, and returning from those parts to Astrachan, with corn, wood, earthen and wooden vessels; and also, from the carts and waggons, thousands of which pass this town every week, especially in winter, conveying salt and fish to the eastern parts of the empire.

On the 24th of August, we went to the Elton salt-lake, called, by the Kalmucks, *Alian-nor* (the golden lake),

lake), on account of its red lustre under the sun. The salt, in this lake, is dug by volunteer workmen, who come here in spring, and work the whole summer. This year there were employed only 550 men; but other years they have seldom been less in number than 1,768; at times, 4,000 have been employed.

At present, the lake was very shallow, and digging of the salt very difficult. They broke it, at two miles from the borders; and even there the water was not more than three quarters of a yard deep: the salt-rinds are broke with heavy bars, similar to those used in Russia, to break the ice in rivers. Having broke it into small pieces, they wash off the slime with the salt-water, and then carry it on shore, to a place enclosed with pales. Each set of salt-breakers sell the salt they dig to the salt-conveyers, dear or cheap, according to the nature of circumstances. Formerly, when there were many workmen, and the work was easier, the salt-conveyers paid them for a waggon-load, drawn by two bullocks, which carries about 120 puds, from 25 to 30 copecs only; but, during the present year, the price rose to 50 or 60 copecs. The waggoners, or conveyers, when arrived at the mart, get the carriage paid by the pud. The distance from the lake to Saratof, is computed to be 135 miles, and the carriage is generally six copecs, or three-halfpence per pud, or 36lb.; but the distance to Dmitrefskoi, being only 85 miles, the carriage is only four copecs per pud. From this sum, they

deduct one denuſchka, for the repair of bridges, and freſh-water wells. A waggon cannot go more than five or ſix journeys in a ſummer, to Saratof; and does not get more, for each load, with two bullocks, than between ſeven and eight rubles; therefore, the more beaſts of draught a waggoner has, the better. A ſalt-dew very frequently falls about this lake; I found it on the 23d of Auguſt, in the morning, upon the reeds, in a kind of milky drops, very ſalt to the taſte. It has been obſerved, that the ſeeds of water-melons, expoſed one night to this dew, will never grow. The borders of the lake, are full of all ſorts of ſalt-plants.

On the 25th of Auguſt, we had to travel over a parched ſtep, where no freſh water was to be had; it was more than 38 miles over. Our horſes were ſo ſpent, that they could ſcarce lift their feet; and though we were within ſight of the Wolga, one of our horſes fell from thirſt, and died the next morning, though immediately after he fell, it rained a heavy ſhower, which would have relieved him. When we reached the river, we were told, by ſome fiſhermen, that we were within ſeven miles of Dubofka, from which the lake Elton lies directly weſt. The next morning, the 27th, we rode to Dubofka, but found the commander of the Coſſacks ſo drunk, that we were obliged to wait till the next day, for horſes to convey us on to Zarizyn.

Zarizyn.

Zarizyn. As I passed the following winter in Zarizyn, where I met with Mr. *Georgi*, I will give my readers some account of this city, the district, the weather, and its natural productions.

Next to Astrachan, Zarizyn is the most ancient, inhabited and fortified place in the lower district of the Wolga. It lies just beyond the mouth of the brook Zariza, on the right-hand bank of the Wolga. The town belongs to the government of Astrachan, is 278 miles from it, and lies in the latitude of 48° 20 min. N. latitude. As there is no circle dependent on Zarizyn, it has only a commandant's chancery. The fortress is an antique structure, and consists of a high rampart and bastions. The works, decayed by age, were lately repaired by the Turkish prisoners of war; and it was so well done, that, in 1774, when a numerous body of rebellious peasants, under *Pugatschef*, attempted an attack on this place, they found themselves obliged to raise the siege, without injuring the fortress at all. The heavy cannon in the place were of the greatest service.

The buildings within the fort are mean. There are but few, good dwelling-houses; every thing in the city being built of wood, except the three churches. The market-place is extensive, has many shops, and here live many substantial merchants, who carry on a great trade with the Kalmucks, and the numerous travellers
that

that pass this way. The smaller number of the inhabitants live by breeding of cattle, and raising cucumbers, melons, and water-melons; also, by fishing, and carrying goods from place to place. Good trades are very much wanting; and, of course, this is a great advantage to the neighbouring colony of Sarepta. The garrison consists of a battalion of light-horse. The commander of the fortress was formerly the chief of the citizens, and the whole district; but, in 1773, the Empress established a court of waywodes.

Quitting the fortress, there is a suburb belonging to this place, inhabited by Cossacks. It is irregularly built, but has a stone church, lately erected; it was found necessary to set fire to the place, when threatened with an attack by *Pugatschef's* party. The Zarizinian line, or boundary, consists of a strong wall, on the south side, with pallisadoes, beginning near the fortress, and continuing uninterrupted as far as the river Don, which lies at the distance of 45 miles from the Wolga. On this line are four redoubts; and between these, at proper distances, a guard-house, encompassed with chevaux-de-frize. The whole is guarded by Cossacks of the Don, who receive a pay of 12 rubles a year; and commanded by the governor of Zarizyn,

“ Six hundred Cossacks of the Don,” says *Gmelin*, who was there in 1769, “ quartered at Zarizyn, are
“ dispatched

“ dispatched regularly every year, in conjunction with
“ some regular troops, to guard this line. At such
“ guard-house, 24 Cossacks, commanded by a sotnik,
“ are lodged in miserable, subterranean barracks.
“ These posts are only relieved every four months ;
“ and the service of the line, lasts for one or two
“ years.

“ Their advanced posts are likewise charged with
“ furnishing travellers, that have passports, with relays ;
“ and, when they go in boats belonging to the Crown,
“ the Cossacks are obliged to perform the office of
“ rowers. If the reader could picture to himself,
“ the idea of the most wretched of the human species,
“ he would form that of a Cossack, employed in the
“ lines of Zarizyn. None are sent there but the
“ poorest and most deplorable of all their race ; and such
“ as have no condition in life, and, destitute, of either
“ friends or money, have no means of avoiding this
“ painful service. From the instant they arrive, their
“ treatment is such as a pitiless and unfeeling peasant
“ would scarce shew to his beast. Though the un-
“ happy Cossack can scarcely obtain a small allow-
“ ance of bread, very hard and very black, to assuage
“ his hunger, he must yet endure all the extremity of
“ heat, and severity of cold, with no other covering
“ than the few rags he brought with him ; or shut him-
“ self up, in some cavern of the earth, with the com-
“ panions of his wretchedness, where it would be im-
“ possible

“ possible for any man, not trained to hardship, and
“ accustomed to distressful situations from his birth,
“ to exist for one minute, and brave the putridity of the
“ air. As to his horse, or two horses, which is all his
“ property, they must be satisfied with much less pro-
“ vender than the unhappy master can allow them
“ for performing the harassing service of his landlord,
“ to whom every horse of the Cossacks is bound. When
“ the term of this slavery is expired, he goes home
“ with his starved beasts, if, perchance, he has been
“ happy enough to preserve their lives, with his own, in
“ a poorer plight than he went away. If, among the
“ number of these poor wretches, some should be dis-
“ covered to have a small matter of money about them,
“ the fate of such as are penniless is perhaps less to
“ be pitied, for the money is sure to increase the re-
“ venues of the officers of Zarizyn; and it is well
“ known, that every Cossack who has any coin, how-
“ ever small in value, commonly disappears before the
“ expiration of his term. Their difficult service as rowers,
“ may be collected from what Mr. *Gmelin* further relates;
“ He says, That when his two companions got into one
“ of the government-boats, on the 20th of September,
“ and had only proceeded a few miles on the Wolga,
“ there arose so furious a tempest from the west, that
“ the waves went over the vessel, and the boatmen, unskil-
“ ful in their business, knew not how to get forwards.
“ Whilst they were in the greatest distress imaginable;
“ they struck, perhaps to the saving of their lives, on a
“ sand-

“ sand-bank, from which they could not get loose till
“ towards midnight; and this relief of mind did not
“ continue long, for soon fresh hurricanes and squalls
“ threw them, alternately, on the two shores of the
“ river; so that, before they reached the advanced post
“ the next morning, they had been cast on six sand-
“ banks, and had delivered themselves from each with
“ the greatest difficulty.”

This district enjoys plenty of every thing, and surpasses the whole country, farther down the Wolga. It is not only excellent, as has been before observed, for the culture of water-melons, but for all sorts of fine fruits. Here grow wild many productions, not to be met with higher up the Wolga, and in other parts of Russia. Wild pears are in great plenty near Dubofka; mulberry-trees abound in the low grounds of the Ach-tuba; tamarisks begin to grow near Zarizyn; and wild plums are abundant towards the Mantysch, and the river Kuma. I sowed, in a water-melon garden near Zarizyn, some seeds of *phaseolus*, which I received from China, and which in Sweden will not grow but in the warmest hot-houses; and they yielded, in August, the finest blossoms and seed.

The weather of this country is as follows. Heavy frosts generally in January, which lower the mercury to 180°, and to 200°, equal to 13° and 23°, below the freezing-point of *Reaumur's* thermometer. When

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at 200°, the weather is stormy, and the frost less sensible. February is variable; has calm frosts, sometimes stormy from N. W. attended with snow, and ends with a thawing wind from W. S. W. In 1774, I was able to observe the whole winter, and February was exceedingly delightful and sweet. About the middle of the month, arrived little birds of passage; and, towards the end, swans, ducks, and other water-fowl. February the 25th, the Wolga was freed from ice: the same day we had thunder; but, on the 28th, to the 11th of March, we had such continued, sharp cold, as froze the river again. The month of April is incontestibly, in this climate, the most settled and finest of all months. No rain falls, but the rivers overflow, and water the land. At this time the water-melons are sown, and the wind, which blows constantly from one district, viz. the east, mitigates the heat. During the latter days of April (in 1774, on the 18th of April), or the middle of May, the wind changes to the south, or south-west, and brings thunder and warm, nightly rains. This fine weather lasts generally three or four weeks, when the wind changes to south, and south-east: then begins the dry weather, which continues ten or twelve weeks. In June it is more supportable; as, during the time when the water stands high in the Wolga, which is always highest this month, the night-dews are most copious, and refresh the earth exceedingly. The rest of this month is generally so serene, that scarce a cloud, the size of a man's hand, is to be seen.

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The hottest and most intolerable of all the summer-months, is July, when it blows constantly from the arid step and sea, S. S. E. or E. After this arise the hot winds, which, though they blow irresistibly, so as to sweep off all the dust from the step, and carry it through the air, are yet as hot as if they came from a fiery furnace. These winds usually commence about two in the afternoon, and continue till past midnight; they seldom last longer. During their blowing, sheep often drop down dead, like flies, froth, bleed at the mouth, or swell, and become so suddenly puffed, that even their skins are of no use. This hot, glowing wind is often owing to the burning of the step, and is then of longer duration. In July, 1774, the mercury rose as high, in the sun, as 60° , in *De Lisle's* thermometer, this is to 56 in *Rheumur's*; and a thermometer-glass, filled with spirit of wine, burst. In the river Sarpa, so great a number of fish and crabs died, that the stench was intolerable. Soon after, it was known that this insupportable heat had risen from the burning of the Kumanian step, which was set on fire, to the circumference of several hundred wersts, each werst three-quarters of an English mile: great numbers of people fell sick by it. At other times, however, it is not uncommon to see the quicksilver, in the thermometer, rise, in this month, in the shade, up to 90 and above (above 27° in the thermometer of *Rheumur* higher than the heat of Pondicherry); and it was observed by Dr. *Wier* at Sarepta (for it is from him I had this information),

to rise in the sun, in 1773, on the 18th of July, and the 1st of August, to 75° ; and, on the 28th of July, in the same year, to 74° ; and, in 1767, it was seen, on the 12th of July, to rise all at once to 60° . The air, during the sultriness of July, is generally so thick, that we cannot see far before us on the even step, though we imagine, by optic error, that we see a great way. This error, or deception, is produced by certain, undulating vapours visible to the eye, arising on the step, hills and high grass, and giving the appearance of distant, high mountains and woods, and representing all objects larger than they are. *Shaw*, *Niebar*, and other oriental travellers, tell us that, in the great deserts of Arabia, trembling vapours will obscure the horizon, and lead the eye to suppose every thing at a distance to be larger than it is. In the district of Zarizyn, during this sultry month, it often appears from far, as if we saw a hill encompassed with water, when we have only an arid step in view. The beginning of this month ripens the water-melons; and the latter half of it, the grapes.

In August, thunders are frequent, arising from S. and S. W. drawing northwards over the Wolga, and falling away about the sea, eastwards; so that they describe a semi-circle. Sometimes, they are accompanied by so violent a hail and rain, as to cause inundations: sometimes, such tempestuous whirlwinds rise as raise the dust from the blossoms of the several species of wormwood,
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so as to darken the air, and leads one to suppose it to be a thick, brown, yellow smoke, or fog. I was eye-witness of such a whirlwind in Zarizyn, and was astonished at the wonderful phenomenon. After some thunder-clouds had obscured the serenity of the day, and shook the whole district with a dreadful hurricane, which only lasted for a quarter of an hour, and withdrew, with a wind-column like a cloud, over the Wolga; my tent, which was pitched in the open step, was suddenly enveloped in a thick, brown smoke.

September is generally serene, clear and temperate; the wind changing to S. S. E. and N. E. October remains always temperate, the winds blowing from N. E. to W. which causes a great deal of fog and moist weather. In November, which they here call the rain-month, in temperate years, the rains change, towards the end, into north-eastern storms, and snow. Frost and storms often prevail, even in the beginning of this month, and the Wolga soon drives ice. In 1773, the thermometer fell, on the 5th, to 190 degrees; and, in the night of the 13th and 14th, the ice became quite fixed.

When the year is mild, the Wolga is not frozen till December; then after a driving of ice, for a week or a fortnight, an east wind, falls in, and fixes it. During this month reign continual storms, with flakes of snow, that continue six or seven days.

December and January can be called only, in general, the winter-months of this district; and they are often so mild, that ducks will remain the whole winter in the open water-spots beyond Zarizyn. Larks, and partridges, will not leave the place, but to go to such salt-spots as are not covered with snow, where they can feed on the seeds of plants. Partridges, which gather here in greatest quantities in September and October, are caught, in the said months, in nets, and till December.

As soon as a violent frost begins in November, the snow-larks come into this district, as the last birds of passage from the northern zone, and reside, during the whole winter, in the lowest Wolga, among the field, and tuft, or crested larks. The black step-larks (*Alauda Tartarica*), come from the step, when the snow and winter-storms rage, and take up their residence in the vicinage of villages, but never leave the district.

Other small birds of passage, that spend the winter in remote countries, come here in September, remain whilst the weather continues mild, and grow fat, by feeding on the seeds of plants. The northern duck (*Anser Erythropus*), arrives, at the end of September, in large flocks; and, after a short stay, draws away southwards. Those water and strand-fowls which do not wander far to the north, as the sea-raven, and step-hen

hen (*Charadrius gregarius*), hie to their winter-abodes about the end of August. "In September," says Gmelin, "the bee-bird (*Merops apiaster*), passes, by " thousands, into other countries. We may judge of the " quantity, by the number of their nests. This bird " builds in the clay, hence it is that the hills which " rise one above another, along the western bank of " the Wolga, from Zarizyn, are stuck as thick with " them as the cells in a bee-hive."

In spring, the birds of passage begin to swarm here, in the middle of February. In the beginning of this month, snow-larks, and snow-ortolans, draw abundantly to the north. About the 25th, one sees, in the Sarpa and Achtuba, every species of swan, and the first wild geese; and the dry rushes are plentifully crowded with tom-tits (*Parus biarmicus et ceruleus*). At the end of the month, the steps are every where on fire.

When the month of March has frost, as it had in this year, the birds of passage hide themselves. This was the season in which during the present year, the wagtail, and black and white rock-nightingale, did not appear, till the 28th. On the 3d of April arrived the first swallows; and, about the same time, the insects burst into life, notwithstanding a cold east-wind blew very sharply.

Between the 6th and 10th of April, we saw, about the Sarpa, whole flocks of the *Anser pulchricollis*, or red-necked geese; but these left the district very soon. Next we saw, for the first time, the male of the bullfinch, *fringilla caelebs*, with the linnet, *fringilla petronia*; and, afterwards, the woodcock, and great numbers of various other species of birds of passage.

This shews how early the birds of passage arrive in this district; and, of course, the warmth of the climate. On the opposite side of the Wolga, are a great many saigaks and antelopes, which draw northwards in winter; also, little mountain-foxes, or korsaks. There is plenty of common, red foxes in the heights, between the Wolga and Don; and a great many hares, which remain also grey during the winter. Wherever there are any roots, there are found the great blind mole, and the lesser mole. Common ermines and weasels, are here in plenty; and, where oaks and hazels grow, the field-mouse, *Quercinus*; also, a great number of race, or jumping-hares, with three toes.

Of insects, they have the scorpion-spider; but the pain, and ill effects of its bite, are soon relieved by the application of oil. They have, also, a very large kind of millepedes, or *scolo pendia*; and fleas engender to such an enormous degree, that all the flocks and herds, and half the human race, would not suffice to furnish them with room. If a man stops a while, in summer,

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on the low grounds about the Wolga, and in the houses, he immediately swarms with these vermin; and they fasten to the noses of the unhappy horses, in such vast quantities, that they seem all black. Other domestic insects, as crickets and moths, are here, as in other places; and the *Blatta Asiatica*, or little moth of China, which begins to be general, extends from Astrachan to the towns above, and will, it is feared, be shortly troublesome to all Russia.

There are a number of chalybeate springs about Zarizyn, some of which are much frequented by the inhabitants, on account of their cooling quality and promoting urine; but, by the use of them, I and my company had all our teeth loosened.

The district of Zarizyn is richer in plants than all the step below; but yet only in vernal plants; for, in May, all the grass and herbs on the hills, begin to wither; and, in the two ensuing, summer-months every vegetable production is burnt up. "Our author enumerates all these plants; but I have omitted them, as they would only swell the work, and be no entertainment to a general reader." They have a good deal of wild asparagus, very fine, and good-flavoured. The natives, who are not Russians, are very fond of it; but the Russians never notice it. Very fine tulips, of different species, grow wild in the step; and boys search for, and get their bulbous roots, with avidity.

I must observe here, that the elm of this country (*Ulmæ campestris*), has a purgative quality. Water, in which the gummy leaves, gathered in summer, or autumn, have been some time steeped, if drank, will open the body, like manna.

The silk-manufactory, belonging to the Crown, is one of the most useful establishments in this neighbourhood. Mulberry-trees (*Morus Tartarica*), grow in such quantities, that there are whole forests of them, mixed with other trees. These supply the silk-worm; the only inconvenience is, that at the time the chrysalis bursts, and the worm is in want of food, the rivers here overflow the country, and they are obliged to gather the leaves in boats. No one can remember the planting of these trees; but the ruins of stone-edifices, all over the step, render it easy to conjecture, that they were planted by those Tartars, who formerly inhabited these deserts, and whose tribe was known by the name of the Golden Horde.

It was now the 24th of April, and, notwithstanding the frequent robberies committed in the wild step by the Kirguese, which rendered the district of the Wolga unsafe, all the last winter, I determined to make a tour along the Achtuba. The fruit of the wild mulberry, which grows along this river, is little inferior to that which grows in gardens. It ripens in the month of June, and may then be gathered, in large quantities;
and

and its juice has been found, by fermentation, to yield a very strong spirit, which has nearly the smell of Hungary water. The Achtuba had not yet received the waters of the overflowing Wolga; and it was so shallow, that we could cross it without wetting the axle-trees of our waggons. Mulberry-trees grew along the banks of this river, to the distance of 15 miles; and Counsellor *Rytshkof* has established here a very flourishing silk-manufactory.

Towards night I reached Nishnoi-Achtubinskoi-Gorodok, which consists of two villages of that name, celebrated for their silk-manufactories. On the 25th, I travelled down the Achtuba, with an escort of 20 Cossacks from the Don.

On the 28th, we went partly over sand-hills, partly through vallies, to the Salt-lake, and the mountain Bogdo; and though we travelled with the same horses, they seemed quite fresh and in spirits, even after a difficult and heavy journey of several days. One of our suite, who accompanied the last waggon, met with a fall, and was so much bruised, that he died four days after, in strong convulsions; and the weather being warm, I ordered his interment on the spot.

This remarkable mountain, Bogdo Oata, as the Kalmucks call it, (*Bogdo* implying, royal, or sublime) has a high eminence, which, at a distance, the Kalmucks

compare to a lion *couchant*, and, from this, sometimes; called it, *Arslan ula*, or, lion's mountain. It's strata may be easily counted from its top, which has about 50 or 55 fathoms perpendicular height. The limestone stratum, at top is grey and hard, and breaks away in great stones, full of petrifications of shell-fish. Under this lime, it mostly consists of loam, mixed with marle, or sand, 22 fathoms deep; and its top layers are much impregnated with common salt. The drains have, in several places, deeply excavated the loam, and formed many, subterranean holes; so that, as I was climbing up the side, the ground sunk under me, and I fell into a pit, up to my arms. Into these holes, the Kalmucks are accustomed to throw coin, cloaths, arms, &c. as gifts, or offerings. The cleft, generally fed thus superstitiously, is said to have broke in a little before the Kalmuck horde left this district; and was filled with water, to the depth of several fathoms; but, at present, there are no signs of it. On the loam layers, is often found felenites, and pieces of common salt, as pure as crystal, and as large as a man's fist. The eastern shelf of the mountain has a very peculiar appearance. Owing to the tenderness of the sand-stone, probably, several little round holes, and grottos, have been formed, by the rapid dashing of the billows, whilst this step was covered by the sea, for these excavations are not to be seen to the whole height of the shelf; and, on its level, towards the salt-lake, lay also some bruised rocks, scattered, which appear to have

have been wholly covered by the water; and near them we find, rolled balls, of different sizes, which, if beaten to pieces, are partly hollow, and contain sand. From these circumstances, and the mountain being entirely insulated, and full of petrified bodies, that could have lived no where but at the bottom of the sea, it is evident, past a doubt, that what is now land, was formerly covered with water. If east-winds blow violently against the grotto-work of this shelf, to one that stands at the top, a noise is heard, seemingly the distant muttering of many hundred people, with various voices, sounding more or less at different times. I observed this plainly to-day, as a violent east-wind blew. The priests of the Kalmucks told the people, that the wise, old man, *Zagban Ebugban*, or spirit of the mountain, has his residence beneath it, where there is an assembly of the blessed, who are constantly praying, and singing hymns.

Underneath the sand-stone, is a high-red strong-coloured bole, encompassing a sand-slate. The superstitious Kalmucks fetch this bole, considering it as the most sacred colour, and paint their tents with it. On the south side of the mountain, is a field of alabaster, with gypseous rocks, and a number of holes, sunk by the subterraneous passage of snow-waters. On the highest part of the mountain, where it consists of sand-rocks, the Kalmucks have erected monuments, consisting of high, square, stone-pillars, which may be
seen

seen at a great distance. Otherwise, we see here, but very few traces of their superstition; and I examined the whole of the mountain very particularly. But four miles and a half from it, towards the Wolga, is an old Kalmuck altar, erected of reeds and earth, the remains of a festival there celebrated.

The Tartars have the most extravagant notions respecting this mountain; and, among others, say, that Bogda stood originally on the side of the Jaik; but that two Kalmuck saints took it into their heads to remove it to the banks of the Wolga. However, previous to their undertaking this painful work, they passed a considerable time in fasting and prayer: this rather weakened them, but they soon got it on their shoulders, and, when they had brought it as far as where it now stands, a sinful thought came into the mind of one of them (other traditions say, that he fell in love with a Kalmuck woman, and had carnal knowledge of her), which so enfeebled him, that he could no longer bear the weight, which fell on him, and crushed him to death; and, that his blood being shed on the ground, produced that red colour, visible in the mountain. As the other was not able to carry it alone, it has stood where it fell.

The situation of this single strata-mountain, though peculiarly remarkable, has yet, within a quarter of a mile of it, a no less remarkable object; viz. an inexhaustible

haustible salt-lake, called *Bogdoin Dabassu*. Its form is oblong, from west to east, and 12 miles long; towards the western bay, its breadth is about five miles, and its circumference thirty miles. Its distance from the next place, on the Achtuba, in a direct line, which is to the lower Pristan, or salt-lake, is reckoned twenty-eight miles; and to the fortress Tschernojarskaja, over all the arms of the Wolga, 32 miles. Carriages, drawn by oxen, go and return in five days; and, drawn by horses, in three days. The western, wide part, on the west side of the mountain, forms a small bay, ending in a wide, round bay, which the salt-diggers call *Kultuk*, or sea-gulph. Beneath the high border of the lake, near the mountain, are several little bitter and fresh-water springs, overgrown with reeds. The whole lake is very shallow; so that, even when the wind blows and raises billows on the shore, any man may cross it, and not be up to his waist. Standing near it, in the sun-shine, it has a fine, greenish colour; but, at a distance, glitters with a silvery white. The water is exceedingly pure, without any bitterness; and even about the springs, it has no bad smell. The bottom is a sandy slime, which sinks in, here and there, but annually covered with salt-rinds, or crusts, as white as snow, being a sediment from the water. The salt, settled this year, was not yet become firm; it was, however, an inch thick, very pure, white, without smell, or any mixture of bitter salt; and, consequently, far better than that of the lake Elton. By autumn, the year's crust is said to grow full
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three inches in depth, or thickness. There are several of these layers, one upon another, but always separated by a layer of mud. The lower kinds are as hard as stone, and, therefore, the salt-breakers, to save trouble, will only take the salt from the surface, which is not crusted.

This lake has long since been made known to the Russians, inhabitants of the Wolga, by the Kalmucks; who, as long as the salt was free to be collected, supplied themselves with it. After it became a prerogative of the Crown, it was conveyed, in 1771, to the Imperial salt-marts at Astrachan, and other places. They first established a salt-mart on the Achtuba, at the distance of 24 miles; but this mart was afterwards removed to a much more distant place, 37 miles; for which the carriers received three copecs a pud. The chief salt-factor is a merchant of Tschernojarskaja, and pays, at present, only two and a half copecs per pud, which the carrier must pay. The salt is far better than that of the lake Elton, and more productive to the public revenue.

The Kalmucks relate, in their ridiculous legends, that, one day, their Delai-Lama having taken his dinner in this place, and thrown on the ground what remained of his fallad-sauce, it produced this lake, which has gradually increased ever since; and that the mountain has been also enlarged to its present size, from Delai-Lama's, taking his rest thereon by night.

Immediately at the foot of Mount Bogdo, on the edge of the desert, at Saikol, the Troughmenian Tartars, subject to the Kalmucks, have their habitations. They are said to have been first settled in this country, by *Saïssin Chorlin*, who came first into the territory of the Moguls in Russia, in 1593, with 50,000 Kibitkas, or families, and 300 Troughmenian families, whom he picked up on the way: others think it was later.

The round-leaved rhapontic, or rhubarb, grows plentifully on the eastern precipice of this mountain, and on the whole alabaster rock. The Kalmucks seek eagerly for the roots, which grow on this sacred spot; and often take secret journies to collect them, particularly as the plant is not to be found west of the river Wolga. They use it as a tea, and take it as a medicine. There are, also, a number of other fine plants, too tedious to mention here.

Not far from this mountain, the Cossacks of my escort, who were moving the stones lying about on the ground, brought me the first scorpion that has been seen in the Russian empire. These conceal themselves among the dry stones, are small, and of a peculiar species; but exactly like those I have seen brought from Persia.

Mr. *Bykof*, in a botanical excursion he made eastwards, from this district to the desert Naryn, in 1773,

at

at 11 miles from Tologoi Kol, met with, in the step, a pyramid, built with bricks by the Kalmucks, but much decayed, called, by them, *Schorolgin - Balgasun* (the earthen city).

Having now fulfilled the design for which I was sent out, and nearly completed my six years tour, I determined to go the nearest way home, and make the best of my road to Moscow; of course, the rest of my journal will not contain any thing remarkable, having been travelled over and explored by Professors *Gmelin* and *Guldenstadt*. Mr. *Georgi* having returned with the last snow through Casan, I set out for Moscow, with all my students and attendants, on the 4th of June, 1774; and reached the city of Tambos, on the 20th. Tambos is situated on the Zna, is an episcopal see, or provincial regency, contains 16 parish-churches, 10,000 inhabitants, an important, annual fair, cloth manufactories, and excellent tradesmen: here I continued three days. Between this, and Moscow, the country is embellished with the seats of the nobility and gentry. In my way, we shot a milk-white bird, of that species called blackbird; and one black, spotted with white. On the 3d of July, I reached Moscow, and having received my recall, by a mandate from the Empress, sent by the Imperial Academy to all its absent members, then on their travels, in quest of physical or geographical knowledge, I ordered my waggons to be speedily repaired, that I might reach the end of my career; which I did on
the

the 30th of July, though with an infirm body, and a hoary head, at the age of 33, yet in better health and spirits than I was whilst in Siberia; and full of grateful acknowledgments to Providence, who had preserved me to this day, amid the numberless dangers to which I had been exposed.

*Jamque hoc immensum spatiis confecimus æquor,
Et jam tempus equum fumantia solvere colla.*

VIRGIL GEORG.

Index of Plates see Vol 5

END OF THE FOURTH VOLUME.

E R R A T A.

VOL. II. page 80, line 12, dele *as it*.

_____ 81, 24, for *read* read *red*.

_____ 89, 16, for *as* read *that*.

_____ 127, last line but one, for *any*, *where*

5 JA 53 read *any where*

VOL. IV. page 144, line 17, for *cembra empetrum rignum*,
read *cembra, empetrum nigrum*.

